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Gesing et al.

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(54) **SUBSTITUTED TRIAZOLOAZINE SULPHONAMIDES**

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(58) **Field of Search** 544/65, 263; 514/229.2, 514/258; 504/223, 241

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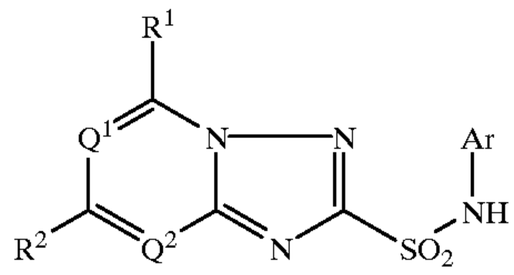
(57) **ABSTRACT**

The invention concerns novel substituted triazoloazine sulphonamides of formula (I)

(I)



in which
Q^1 stands for nitrogen or a CH group: Q^2 stands for nitrogen or a CH group; R^1 stands for hydrogen or halogen, or for C_1–C_4 alkyl, C_1–C_4 alkoxy, C_1–C_4 alkylthio, C_1–C_4 alkylamino or di(C_1–C_4 alkyl)amino, in each case optionally substituted by hydroxy, halogen or C_1–C_4 alkoxy; R^2 stands for hydrogen or halogen, or for C_1–C_4 alkyl, C_1–C_4 alkoxy, C_1–C_4 alkylthio, C_1–C_4 alkylamino or di(C_1–C_4 alkyl) amino, in each case optionally substituted by halogen; and Ar stands for 4-cyano-2,5-difluoro-phenyl, 2,6-dimethoxy-phenyl, 2-bromo-3-trifluoro-methyl-phenyl, 2-bromo-5-trifluoromethyl-phenyl, 6-chloro-pyridine-3-yl-methyl or one of the 5- or 6-member (hetero)cyclic groups mentioned in the description. The invention also concerns salts of these substances, a process for preparing the novel compounds, and their use as plant-treatment agents.

5 Claims, No Drawings

SUBSTITUTED TRIAZOLOAZINE SULPHONAMIDES

TECHNICAL FIELD OF THE INVENTION

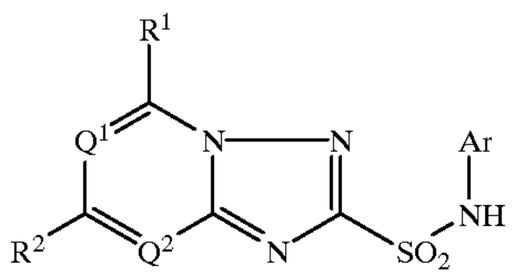
The invention relates to novel substituted triazoloazinesulphonamides, to processes for their preparation and to their use as plant treatment agents.

BACKGROUND OF THE INVENTION

A large number of triazoloazinesulphonamides is already known from the (patent) literature (cf. EP 142152, EP 244847, EP 375076, U.S. Pat. No. 4,605,433, U.S. Pat. No. 5,163,995, WO 89/10368, Pestic. Sci. 29 (1990), 341–355).

DETAILED DESCRIPTION OF THE INVENTION

Novel substituted triazoloazinesulphonamides of the general formula (I)



(I)

in which

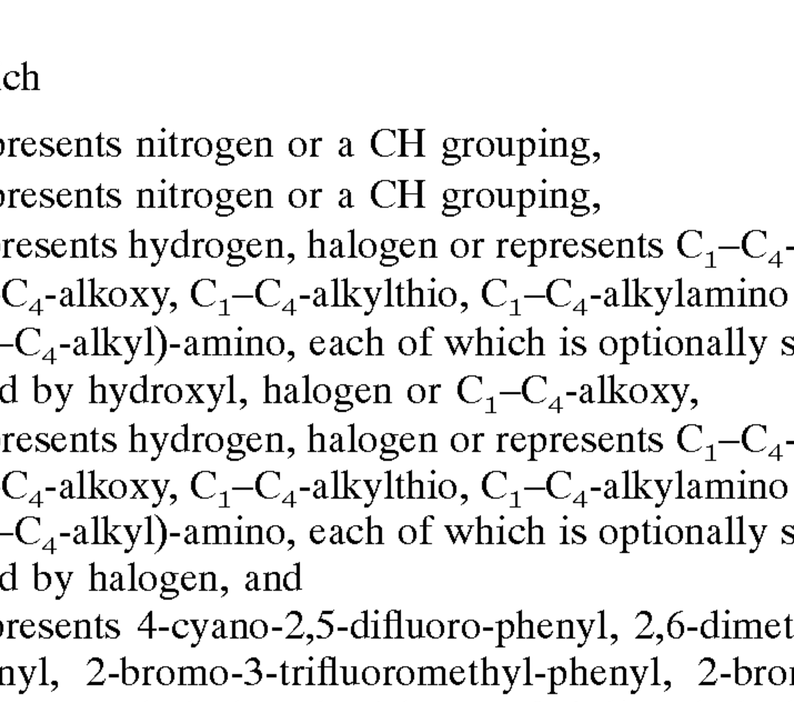
Q^1 represents nitrogen or a CH grouping,

Q^2 represents nitrogen or a CH grouping,

R^1 represents hydrogen, halogen or represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_1–C_4-alkylthio, C_1–C_4-alkylamino or di-(C_1–C_4-alkyl)-amino, each of which is optionally substituted by hydroxyl, halogen or C_1–C_4-alkoxy,

R^2 represents hydrogen, halogen or represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_1–C_4-alkylthio, C_1–C_4-alkylamino or di-(C_1–C_4-alkyl)-amino, each of which is optionally substituted by halogen, and

Ar represents 4-cyano-2,5-difluoro-phenyl, 2,6-dimethoxy-phenyl, 2-bromo-3-trifluoromethyl-phenyl, 2-bromo-5-trifluoromethyl-phenyl, 4-bromo-2,6-dimethyl-phenyl, 6-chloro-pyridin-3-yl-methyl or one of the 5- or 6-membered (hetero)cyclic groupings below:



in which

m in each case represents the numbers 1 or 2,

n in each case represents the numbers 0, 1 or 2,

A^1 represents optionally cyano-, halogen- or C_1–C_4-alkoxy-substituted C_1–C_4-alkyl or represents optionally cyano-, halogen- or C_1–C_4 -alkyl-substituted C_3–C_6-cycloalkyl,

A^2 represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_1–C_4-alkylthio, C_1–C_4-alkylsulphinyl or C_1–C_4-alkylsulphonyl, each of which is optionally substituted by halogen,

R^3 represents optionally cyano-, halogen- or C_1–C_4-alkoxy-substituted C_1–C_4-alkyl,

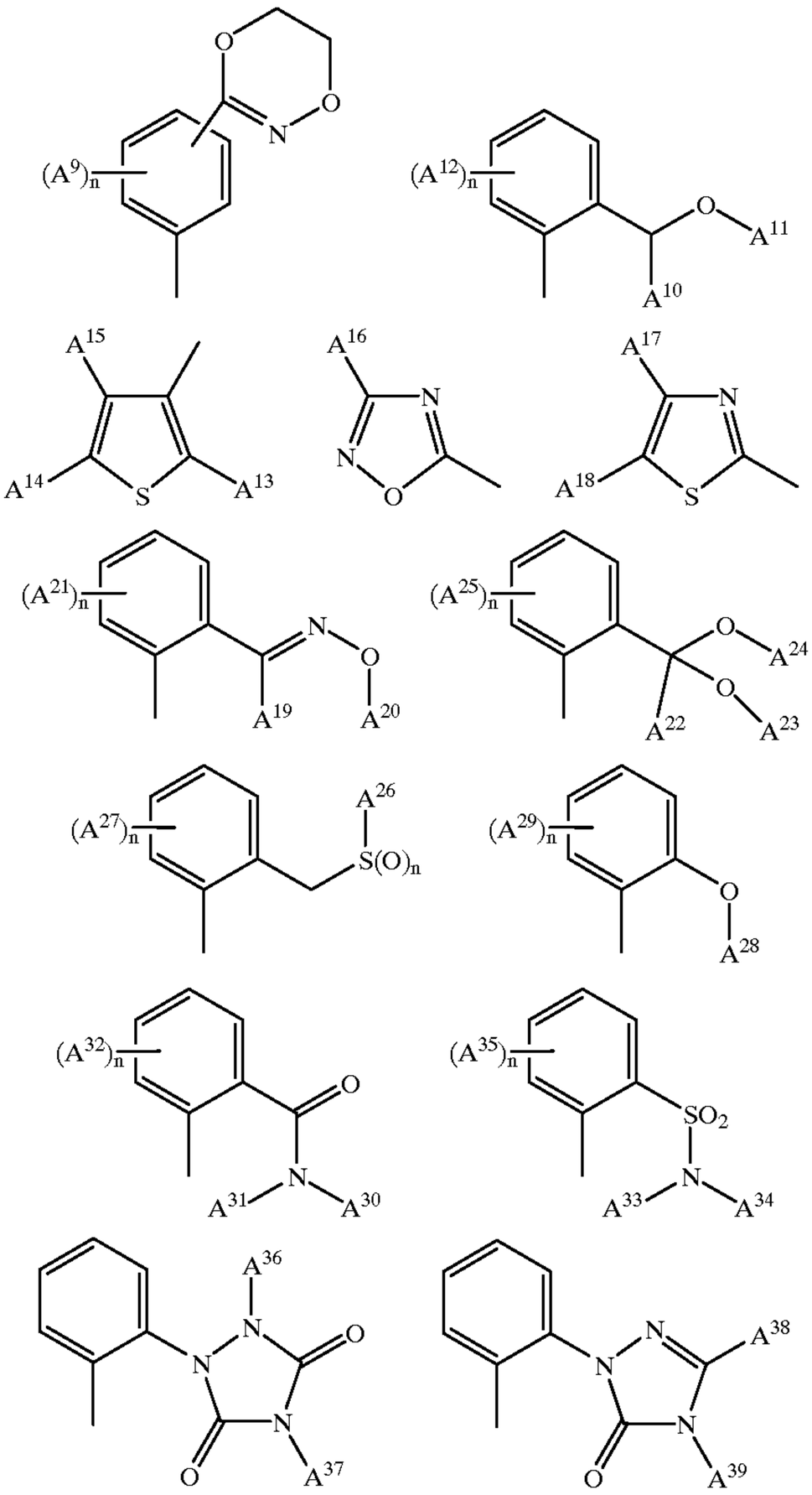
A^4 represents optionally cyano-, halogen- or C_1–C_4-alkoxy-substituted C_1–C_4-alkyl,

A^5 represents optionally cyano-, halogen- or C_1–C_4-alkoxy-substituted C_2–C_4-alkyl, represents optionally halogen-substituted C_2–C_4-alkenyl or represents optionally cyano-, halogen- or C_1–C_4-alkyl-substituted C_3–C_6-cycloalkyl-C_1–C_4-alkyl,

A^6 represents halogen or represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_2–C_4-alkenyl or C_2–C_4-alkenyloxy, each of which is optionally substituted by halogen,

A^7 represents cyano-, halogen- or C_1–C_4-alkoxy-substituted C_1–C_4-alkyl,

-continued



A^8 represents cyano, nitro or optionally halogen-substituted C_1–C_4-alkyl,

A^9 represents cyano, halogen or optionally halogen-substituted C_1–C_4-alkyl,

A^{10} represents optionally cyano-, halogen- or C_1–C_4-alkoxy-substituted C_1–C_4 -alkyl or represents optionally cyano-, halogen- or C_1–C_4-alkyl-substituted C_3–C_6-cycloalkyl,

A^{11} represents hydrogen or represents C_1–C_4-alkyl, C_1–C_4-alkyl-carbonyl, C_1–C_4-alkoxycarbonyl or C_1–C_4-alkylsulphonyl, each of which is optionally substituted by cyano, halogen or C_1–C_4-alkoxy,

A^{12} represents hydrogen, cyano, halogen or optionally halogen-substituted C_1–C_4-alkyl,

A^{13} represents cyano, carbamoyl, 5,6-dihydro-1,4,2-dioxazin-3-yl, halogen, C_1–C_4-alkyl, C_1–C_4-alkyl-carbonyl or C_1–C_4-alkoxy-carbonyl,

A^{14} represents hydrogen, represents cyano, carbamoyl, halogen, C_1–C_4-alkyl, C_1–C_4-alkylcarbonyl or C_1–C_4-alkoxy-carbonyl,

A^{15} represents hydrogen, represents cyano, carbamoyl, halogen, C_1–C_4-alkyl, C_1–C_4-alkylcarbonyl or C_1–C_4-alkoxy-carbonyl, or together with A^{14} represents a fused benzo grouping,

A^{16} represents hydrogen, cyano, halogen or represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_1–C_4-alkylthio, C_1–C_4-alkylsulphinyl or C_1–C_4-alkylsulphonyl, each of which is optionally substituted by halogen,

A^{17} represents hydrogen, cyano, halogen or optionally halogen-substituted C_1–C_4-alkyl,

A^{18} represents hydrogen, cyano, halogen or optionally halogen-substituted C_1–C_4-alkyl,

A^{19} represents hydrogen or C_1–C_4-alkyl,

A^{20} represents C_1–C_4-alkyl or C_2–C_4-alkenyl,

A^{21} represents cyano, halogen, C_1–C_4-alkyl or C_1–C_4-halogenoalkyl,

A^{22} represents C_1–C_4-alkyl or C_1–C_4-halogenoalkyl,

A^{23} represents C_1–C_4-alkyl,

A^{24} on its own represents C_1–C_4-alkyl or together with A^{23} represents C_2–C_4-alkanediyl,

A^{25} represents cyano, halogen, C_1–C_4-alkyl or C_1–C_4-halogenoalkyl,

A^{26} represents C_1–C_4-alkyl,

A^{27} represents cyano, halogen, C_1–C_4-alkyl, C_1–C_4-halogenoalkyl, C_1–C_4-alkoxy or C_1–C_4-halogenoalkoxy,

A^{28} represents hydrogen, difluoromethyl, C_1–C_4-alkyl-carbonyl, C_1–C_4-alkoxy-carbonyl or C_1–C_4-alkylsulphonyl,

A^{29} represents cyano, halogen, C_1–C_4-alkyl or C_1–C_4-halogenoalkyl,

A^{30} represents hydrogen, C_1–C_4-alkyl or C_1–C_4-alkoxy,

A^{31} represents hydrogen or C_1–C_4-alkyl,

A^{32} represents cyano, halogen, C_1–C_4-alkyl or C_1–C_4-halogenoalkyl,

A^{33} represents hydrogen, C_1–C_4-alkyl or C_1–C_4-alkoxy,

A^{34} represents hydrogen or C_1–C_4-alkyl,

A^{35} represents cyano, halogen, C_1–C_4-alkyl or C_1–C_4-halogenoalkyl,

A^{36} represents hydrogen, C_1–C_4-alkyl, C_3–C_6-cycloalkyl or phenyl,

A^{37} represents hydrogen, C_1–C_4-alkyl, C_3–C_6-cycloalkyl or phenyl,

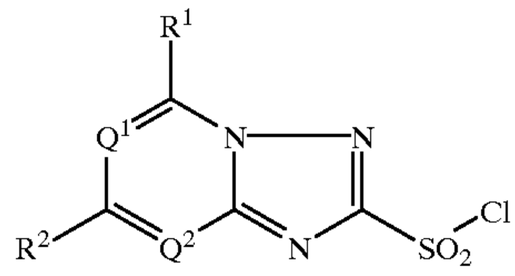
A^{38} represents hydrogen, halogen, represents C_1–C_4-alkyl, C_1–C_4-alkoxy or C_1–C_4-alkylthio, each of which is optionally substituted by cyano, halogen or C_1–C_4-alkoxy, or represents C_3–C_6-cycloalkyl, C_3–C_6-cycloalkyloxy or C_3–C_6-cycloalkyl-C_1–C_4-alkyl, each of which is optionally substituted by cyano, halogen or C_1–C_4-alkyl, and

A^{39} represents hydrogen, represents C_1–C_4-alkyl or C_1–C_4-alkoxy, each of which is optionally substituted by cyano, halogen or C_1–C_4-alkoxy, or represents C_3–C_6-cycloalkyl, C_3–C_6-cycloalkyloxy or C_3–C_6-cycloalkyl-C_1–C_4-alkyl, each of which is optionally substituted by cyano, halogen or C_1–C_4-alkyl,

and also salts of the compounds of the formula (I) have now been found.

The novel substituted triazoloazinesulphonamides of the general formula (I) are obtained when substituted triazoloazinesulphonyl chlorides of the general formula (II)

(II)



in which

Q^1, Q^2, R^1 and R^2 are each as defined above

are reacted with amino(hetero)arenes of the general formula (III)

$$H_2N\text{—}Ar \qquad \text{(III)}$$

in which

Ar is as defined above,

if appropriate in the presence of a reaction auxiliary and if appropriate in the presence of a diluent and, if appropriate, further transformation reactions within the framework of the above definition of substituents are carried out by customary methods on the resulting compounds of the formula (I).

The novel substituted triazoloazinesulphonamides of the general formula (I) have interesting biological properties, allowing their use as plant treatment agents. They have strong herbicidal, fungicidal and insecticidal activity and in particular have excellent and selective herbicidal action.

The invention preferably provides compounds of the formula (I) in which

Q^1 represents nitrogen or a CH grouping,

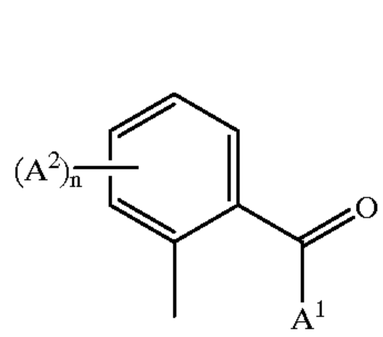
Q^2 represents nitrogen or a CH grouping,

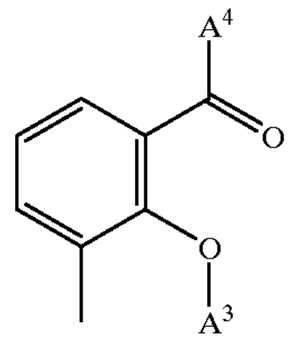
R^1 represents hydrogen, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylamino, ethylamino, n- or i-propylamino, dimethylamino or diethylamino, each of which is optionally substituted by fluorine, chlorine, methoxy or ethoxy,

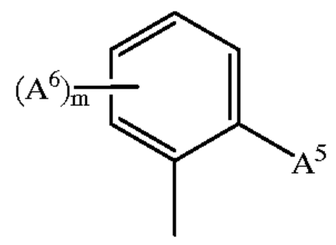
R^2 represents hydrogen, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylamino, ethylamino, n- or i-propylamino, dimethylamino or diethylamino, each of which is optionally substituted by fluorine, chlorine, methoxy or ethoxy,

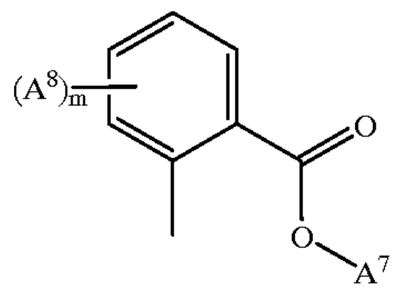
Ar represents 4-cyano-2,5-difluoro-phenyl, 2,6-dimethoxy-phenyl, 2-bromo-3-trifluoromethyl-phenyl, 2-bromo-5-trifluoromethyl-phenyl, 4-bromo-2,6-dimethyl-phenyl, 6-chloro-pyridin-3-yl-methyl or one of the groupings

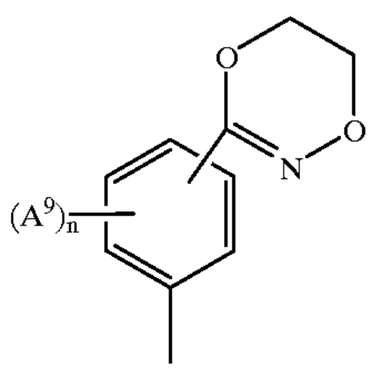
below:

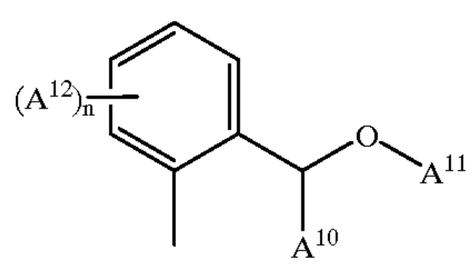


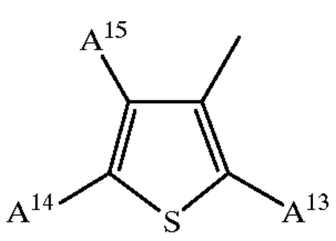


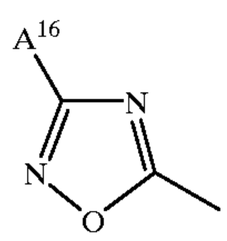


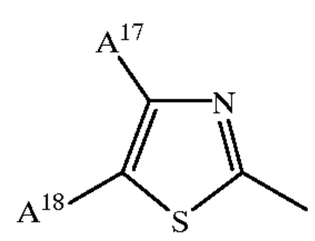


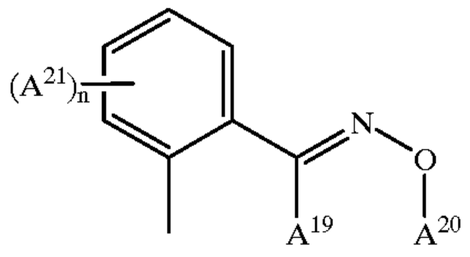


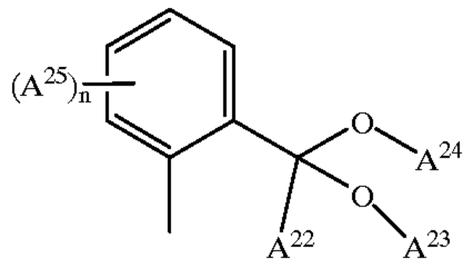


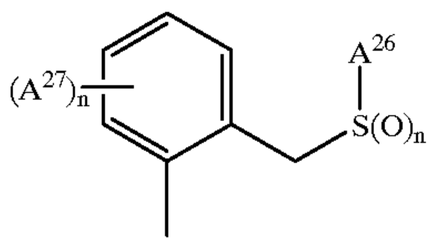


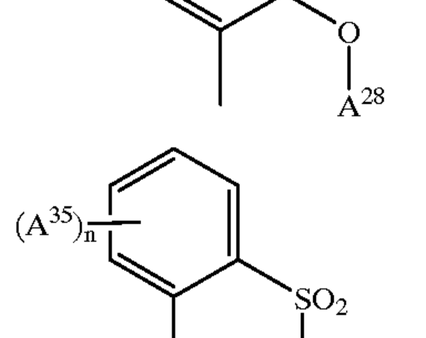


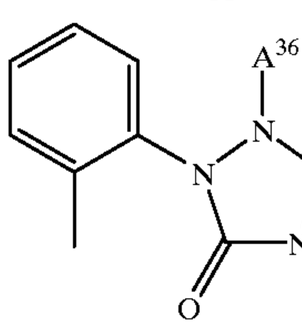


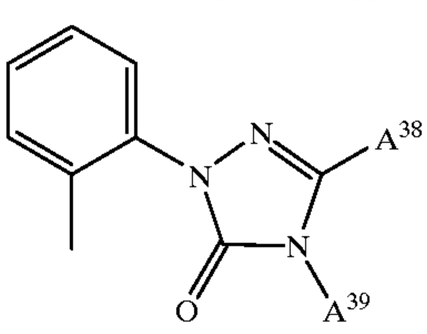












in which

m in each case represents the numbers 1 or 2,

n in each case represents the numbers 0, 1 or 2,

A^1 represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methoxy or ethoxy, or represents cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methyl or ethyl,

A^2 represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n-or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, each of which is optionally substituted by fluorine, chlorine or bromine,

A^3 represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methoxy or ethoxy,

A^4 represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methoxy or ethoxy,

A^5 represents ethyl, n- or i-propyl, n-, i-, s- or t-butyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methoxy or ethoxy, represents propenyl or butenyl, each of which is optionally substituted by halogen, or cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl or cyclohexylmethyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methyl or ethyl,

A^6 represents fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, propenyl, butenyl, propenyloxy or butenyloxy, each of which is optionally substituted by fluorine or chlorine,

A^7 represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by cyano, fluorine, chlorine, bromine, methoxy or ethoxy,

A^8 represents cyano, nitro or represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by fluorine or chlorine,

A^9 represents cyano, fluorine, chlorine or represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by fluorine or chlorine,

A^{10} represents hydrogen, represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by cyano, fluorine, chlorine, methoxy or ethoxy, or represents cyclopropyl, cyclobutyl, cyclopentyl or cyclohexyl, each of which is optionally substituted by cyano, fluorine, chlorine, methyl or ethyl,

A^{11} represents hydrogen or represents methyl, ethyl, n- or i-propyl, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, each of which is optionally substituted by cyano, fluorine, chlorine, methoxy or ethoxy,

A^{12} represents hydrogen, cyano, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by fluorine or chlorine,

A^{13} represents cyano, carbamoyl, 5,6-dihydro-1,4,2-dioxazin-3-yl, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl,

A^{14} represents hydrogen, represents cyano, carbamoyl, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl,

A^{15} represents hydrogen, represents cyano, carbamoyl, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl, or together with A^{14} represents a fused benzo grouping,

A^{16} represents hydrogen, cyano, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylsulphinyl, ethylsulphinyl, n- or i-propylsulphinyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl, each of which is optionally substituted by fluorine or chlorine,

A^{17} represents hydrogen, cyano, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by fluorine or chlorine,

A^{18} represents hydrogen, cyano, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, each of which is optionally substituted by fluorine or chlorine,

A^{19} represents hydrogen, methyl, ethyl, n- or i-propyl,

A^{20} represents methyl, ethyl, n- or i-propyl or represents propenyl or butenyl,

A^{21} represents cyano, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, or represents trifluoromethyl,

A^{22} represents methyl, ethyl, n- or i-propyl,

A^{23} represents methyl, ethyl, n- or i-propyl,

A^{24} on its own represents methyl, ethyl, n- or i-propyl or together with A^{23} represents ethane-1,2-diyl (dimethylene) or propane-1,3-diyl (trimethylene),

A^{25} represents cyano, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, or represents trifluoromethyl,

A^{26} represents methyl, ethyl, n- or i-propyl,

A^{27} represents cyano, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, or represents trifluoromethyl,

A^{28} represents hydrogen, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl, methylsulphonyl, ethylsulphonyl, n- or i-propylsulphonyl,

A^{29} represents cyano, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, or represents trifluoromethyl,

A^{30} represents hydrogen, methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy,

A^{31} represents hydrogen or methyl, ethyl, n- or i-propyl,

A^{32} represents cyano, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, or represents trifluoromethyl,

A^{33} represents hydrogen, methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy,

A^{34} represents hydrogen, methyl, ethyl, n- or i-propyl,

A^{35} represents cyano, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, or represents trifluoromethyl,

A^{36} represents hydrogen, methyl, ethyl, n- or i-propyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl or phenyl,

A^{37} represents hydrogen, methyl, ethyl, n- or i-propyl, cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl or phenyl,

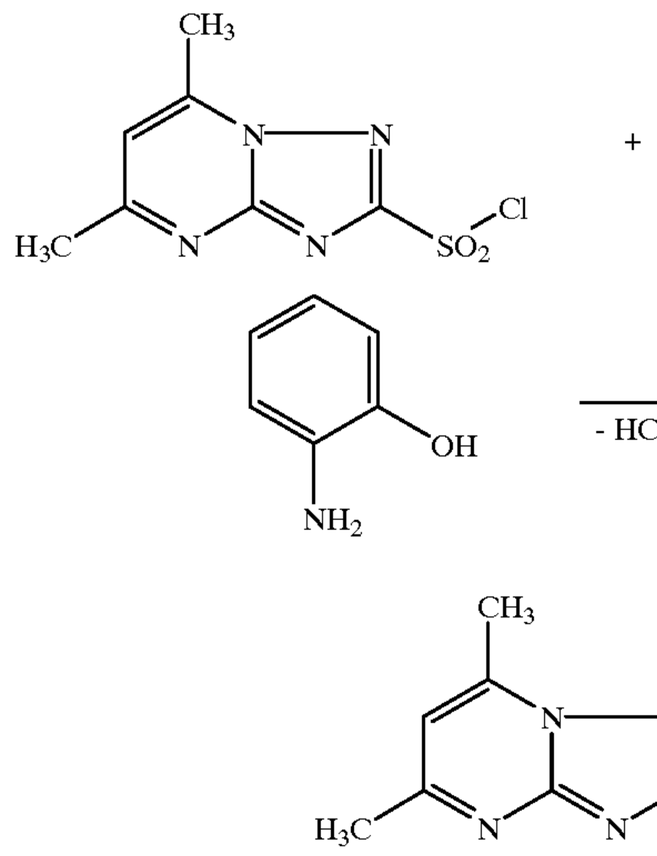
A^{38} represents hydrogen, fluorine, chlorine, bromine, represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n-or i-propylthio, each of which is optionally substituted by cyano, fluorine, chlorine, methoxy or ethoxy, or represents cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl or cyclohexylmethyl, each of which is optionally substituted by cyano, fluorine, chlorine, methyl or ethyl, and

A^{39} represents hydrogen, represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, each of which is optionally substituted by cyano, fluorine, chlorine, methoxy or ethoxy, or represents cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cyclopropyloxy, cyclobutyloxy, cyclopentyloxy, cyclohexyloxy, cyclopropylmethyl, cyclobutylmethyl, cyclopentylmethyl or cyclohexylmethyl, each of which is optionally substituted by cyano, fluorine, chlorine, methyl or ethyl.

The invention also preferably provides lithium, sodium, potassium, magnesium, calcium, ammonium, C_1–C_4-alkyl-ammonium, di-(C_1–C_4-alkyl)-ammonium, tri-(C_1–C_4)-alkyl)-ammonium, tetra-(C_1–C_4-alkyl)-ammonium, tri-(C_1–C_4-alkyl)-sulphonium, C_5- or C_6-cycloalkyl-ammonium and di-(C_1–C_2-alkyl)-benzyl-ammonium salts of compounds of the formula (I).

The above-mentioned general or preferred radical definitions apply both to the end products of the formula (I) and also, correspondingly, to the starting materials or intermediates required in each case for the preparation. These radical definitions can be combined with each other as desired, i.e. including combinations between the given ranges.

Using, for example, 5,7-dimethyl-1,2,4-triazolo[1,5-a] pyrimidine-2-sulphonyl chloride and 2-amino-phenol as starting materials, the course of the reaction in the process according to the invention can be illustrated by the following equation:



The formula (II) provides a general definition of the triazoloazinesulphonyl chlorides to be used as starting materials in the process according to the invention for preparing compounds of the formula (I). In the formula (II), Q^1, Q^2, R^1 and R^2 each preferably have those meanings which have already been indicated above, in connection with the description of the compounds of the formula (I) according to the invention, as being preferred for Q^1, Q^2, R^1 and R^2.

The starting materials of the formula (II) are known and/or can be prepared by processes known per se (cf. EP 142152, EP 244847, EP 375076, U.S. Pat. No. 4,605,433, U.S. Pat. No. 5,163,995, WO 89/10368).

The formula (III) provides a general definition of the amino(hetero)arenes further to be used as starting materials in the process according to the invention. In the formula (III), Ar preferably has that meaning which has already been indicated above, in connection with the description of the compounds of the formula (I) according to the invention, as being preferred for Ar.

The starting materials of the formula (III) are known and/or can be prepared by processes known per se (cf. EP 142152, EP 244847, EP 375076, U.S. Pat. No. 4,605,433, U.S. Pat. No. 5,163,995, WO 89/10368).

Suitable reaction auxiliaries for the process according to the invention are generally the customary inorganic or organic bases or acid acceptors. These preferably include alkali metal or alkaline earth metal acetates, amides, carbonates, bicarbonates, hydrides, hydroxides or alkoxides, such as, for example, sodium acetate, potassium acetate or calcium acetate, lithium amide, sodium amide, potassium amide or calcium amide, sodium carbonate, potassium carbonate or calcium carbonate, sodium bicarbonate, potassium bicarbonate or calcium bicarbonate, lithium hydride, sodium hydride, potassium hydride or calcium hydride, lithium hydroxide, sodium hydroxide, potassium hydroxide or calcium hydroxide, sodium methoxide or potassium methoxide, sodium ethoxide or potassium ethoxide, sodium n- or i-propoxide or potassium n- or i-propoxide, sodium n-, i-, s- or t-butoxide or potassium n-, i-, s- or t-butoxide; furthermore also basic organic nitrogen compounds, such as, for example, trimethylamine, triethylamine, tripropylamine, tributylamine, ethyldiisopropylamine, N,N-dimethyl-cyclohexylamine, dicyclohexylamine, ethyl-dicyclohexylamine, N,N-dimethyl-aniline, N,N-dimethyl-benzylamine, pyridine, 2-methyl-, 3-methyl-, 4methyl-, 2,4-dimethyl-, 2,6-dimethyl-, 3,4-dimethyl- and 3,5-dimethyl-pyridine, 5-ethyl-2-methyl-pyridine, 4-dimethylamino-pyridine, N-methylpiperidine, 1,4-diazobicyclo[2.2.2]-octane (DABCO), 1,5-diazabicyclo[4.3.0]-non-5-ene (DBN), or 1,8-diazabicyclo[5.4.0]-undec-7-ene (DBU).

Suitable diluents for carrying out the process according to the invention are in particular inert organic solvents. These preferably include aliphatic, alicyclic or aromatic, optionally halogenated hydrocarbons, such as, for example, benzine, benzene, toluene, xylene, chlorobenzene, dichlorobenzene, petroleum ether, hexane, cyclohexane, dichloromethane, chloroform, carbon tetrachloride; ethers, such as diethyl ether, diisopropyl ether, dioxane, tetrahydrofuran or ethylene glycol dimethyl ether or ethylene glycol diethyl ether; ketones, such as acetone, butanone or methyl isobutyl ketone; nitriles, such as acetonitrile, propionitrile or butyronitrile; amides, such as N,N-dimethylformamide, N,N-dimethylacetamide, N-methyl-formanilide, N-methyl-pyrrolidone or hexamethylphosphoric triamide; esters such as methyl acetate or ethyl acetate; sulphoxides, such as dimethyl sulphoxide; alcohols, such as methanol, ethanol, n- or i-propanol, ethylene glycol monomethyl ether, ethylene glycol monoethyl-ether, diethylene glycol monomethyl ether, diethylene glycol monoethyl ether, mixtures thereof with water or pure water.

When carrying out the process according to the invention, the reaction temperatures can be varied within a relatively wide range. In general, the reaction is carried out at temperatures between 0° C. and 100° C., preferably between 10° C. and 60° C.

The process according to the invention is generally carried out under atmospheric pressure. However, it is also possible to carry out the process according to the invention under elevated or reduced pressure—in general between 0.1 bar and 10 bar.

For carrying out the process according to the invention, the starting materials are generally employed in approximately equimolar amounts. However, it is also possible to employ one of the components in a relatively large excess. The reaction is generally carried out in a suitable diluent in the presence of a reaction auxiliary, and the reaction mixture is generally stirred at the required temperature for several hours. Work-up is carried out by customary methods (cf. the Preparation Examples).

The active compounds of the formula (I) according to the invention can be used as defoliants, desiccants, haulm killers and, especially, as weed-killers. By weeds, in the broadest sense, there are to be understood all plants which grow in locations where they are not wanted. Whether the substances according to the invention act as total or selective herbicides depends essentially on the amount used.

The active compounds according to the invention can be used, for example, in connection with the following plants:

Dicotyledonous weeds of the genera: Sinapis, Lepidium, Galium, Stellaria, Matricaria, Anthemis, Galinsoga, Chenopodium, Urtica, Senecio, Amaranthus, Portulaca, Xanthium, Convolvulus, Ipomoea, Polygonum, Sesbania, Ambrosia, Cirsium, Carduus, Sonchus, Solanum, Rorippa, Rotala, Lindernia, Lamium, Veronica, Abutilon, Emex, Datura, Viola, Galeopsis, Papaver, Centaurea, Trifolium, Ranunculus and Taraxacum.

Dicotyledonous crops of the genera: Gossypium, Glycine, Beta, Daucus, Phaseolus, Pisum, Solanum, Linum, Ipomoea, Vicia, Nicotiana, Lycopersicon, Arachis, Brassica, Lactuca, Cucumis and Cucurbita.

Monocotyledonous weeds of the genera: Echinochloa, Setaria, Panicum, Digitaria, Phleum, Poa, Festuca, Eleusine, Brachiaria, Lolium, Bromus, Avena, Cyperus, Sorghum, Agropyron, Cynodon, Monochoria, Fimbristylis, Sagittaria, Eleocharis, Scirpus, Paspalum, Ischaemum, Sphenoclea, Dactyloctenium, Agrostis, Alopecurus and Apera.

Monocotyledonous crops of the genera: Oryza, Zea, Triticum, Hordeum, Avena, Secale, Sorghum, Panicum, Saccharum, Ananas, Asparagus and Allium.

However, the use of the active compounds according to the invention is in no way restricted to these genera, but also extends in the same manner to other plants.

The compounds are suitable, depending on the concentration, for the total control of weeds, for example on industrial terrain and rail tracks, and on paths and squares with or without tree plantings. Equally, the compounds can be employed for controlling weeds in perennial crops, for example afforestations, decorative tree plantings, orchards, vineyards, citrus groves, nut orchards, banana plantations, coffee plantations, tea plantations, rubber plantations, oil palm plantations, cocoa plantations, soft fruit plantings and hopfields, in lawns, turf and pasture-land and for the selective control of weeds in annual crops.

The compounds of the formula (I) according to the invention are particularly suitable for the selective control of monocotyledonous and dicotyledonous weeds in monocotyledonous and dicotyledonous crops, both pre-emergence and post-emergence.

The active compounds of the formula (I) according to the invention to a certain extent also have strong microbicidal action and can be practically employed for controlling undesirable microorganisms. The active compounds are consequently also suitable for use as fungicides and bactericides.

Fungicides in plant protection are employed for controlling Plasmodiophoromycetes, Oomycetes, Chytridiomycetes, Zygomycetes, Ascomycetes, Basidiomycetes and Deuteromycetes.

Bactericides in plant protection are employed for controlling Pseudomonadaceae, Rhizobiaceae, Enterobacteriaceae, Corynebacteriaceae and Streptomycetaceae.

Some causative organisms of fungal and bacterial diseases which come under the generic names listed above may be mentioned as examples, but not by way of limitation:

Xanthomonas species, such as *Xanthomonas campestris pv. oryzae;* Pseudomonas species, such as *Pseudomonas syringae pv. lachrymans;* Erwinia species, such as *Erwinia amylovora;* Pythium species, such as *Pythium ultimum;* Phytophthora species, such as *Phytophthora infestans;* Pseudoperonospora species, such as *Pseudoperonospora humuli* or *Pseudoperonospora cubensis;* Plasmopara species, such as *Plasmopara viticola;* Bremia species, such as *Bremia lactucae;* Peronospora species, such as *Peronospora pisi* or *P. brassicae;* Erysiphe species, such as *Erysiphe graminis;* Sphaerotheca species, such as *Sphaerotheca fuliginea;* Podosphaera species, such as *Podosphaera leucotricha;* Venturia species, such as *Venturia inaequalis;* Pyrenophora species, such as *Pyrenophora teres* or *P. graminea* (conidia form: Drechslera, syn: Helminthosporium); Cochliobolus species, such as *Cochliobolus sativus* (conidia form: Drechslera, syn: Helminthosporium); Uromyces species, such as *Uromyces appendiculatus;* Puccinia species, such as *Puccinia recondita;* Scierotinia species, such as *Sclerotinia sclerotiorum;* Tilletia species, such as *Tilletia caries;* Ustilago species, such as *Ustilago nuda* or *Ustilago avenae;* Pellicularia species, such as *Pellicularia sasakii;*

Pyricularia species, such as *Pyricularia oryzae;* Fusarium species, such as *Fusarium culmorum;* Botrytis species, such as *Botrytis cinerea;* Septoria species, such as *Septoria nodorum;* Leptosphaeria species, such as *Leptosphaeria nodorum;* Cercospora species, such as *Cercospora canescens;* Altemaria species, such as *Alternaria brassicae;* Pseudocercosporella species, such as *Pseudocercosporella herpotrichoides.*

The good toleration, by plants, of some of the active compounds, at the concentrations required for controlling plant diseases, permits treatment of aerial parts of plants, of vegetative propagation stock and seeds, and of the soil.

The active compounds according to the invention can be employed here very successfully for controlling diseases in fruit and vegetable growing, such as, for example, against Podosphaera and Sphaerotheca species, and also for controlling rice diseases, such as, for example, Pyricularia oryzae.

The active compounds of the formula (I) according to the invention are to a certain extent also suitable for controlling animal pests, preferably arthropods and nematodes, in particular insects and arachnids which are encountered in agriculture, in forests, in the protection of stored products and of materials, and in the hygiene sector. They are active against normally sensitive and resistant species and against all or some stages of development. The above-mentioned pests include:

From the order of Isopoda, for example, *Oniscus asellus, Armadillidium vulgare* and *Porcellio scaber;* from the order of the Diplopoda, for example, *Blaniulus guttulatus;* from the order of the Chilopoda, for example, *Geophilus carpophagus* and Scutigera spec; from the order of the Symphyla, for example, *Scutigerella immaculata;* from the order of the Thysanura, for example, *Lepisma saccharina;* from the order of the Collembola, for example, *Onychiurus armatus;* from the order of the Orthoptera, for example, *Blatta orientalis, Periplaneta americana, Leucophaea maderae, Blatella germanica, Acheta domesticus,* Gryllotalpa spp., *Locusta migratoria migratorioides, Melanoplus differentialis* and *Schistocerca gregaria;* from the order of the Dermaptera, for example, *Forficula auricularia;* from the order of the Isoptera, for example, Reticulitermes spp.; from the order of the Anoplura, for example, *Pediculus humanus corporis,* Haematopinus spp. and Linognathus spp; from the order of the Mallophaga, for example, Trichodectes spp. and Damalinea spp; from the order of the Thysanoptera, for example, *Hercinothrips femoralis* and *Thrips tabaci;* from the order of the Heteroptera, for example, Eurygaster spp., *Dysdercus intermedius, Piesma quadrata, Cimex lectularius, Rhodnius prolixus* and Triatoma spp.; from the order of the Homoptera, for example, *Aleurodes brassicae, Bemisia tabaci, Trialeurodes vaporariorum, Aphis gossypii, Brevicoryne brassicae, Cryptomyzus ribis, Aphis fabae, Aphis pomi, Eriosoma lanigerum, Hyalopterus arundinis, Macrosiphum avenae,* Myzus spp., Pemphigus spp., *Phorodon humuli, Phylloxera vastatrix, Rhopalosiphum padi,* Empoasca spp., *Euscelis bilobatus, Nephotettix cincticeps, Lecanium corni, Saissetia oleae, Laodelphax striatellus, Nilaparvata lugens, Aonidiella aurantii, Aspidiotus hederae,* Pseudococcus spp. and Psylla spp.; from the order of the Lepidoptera, for example, *Pectinophora gossypiella, Bupalus piniarius, Cheimatobia brumata, Lithocolletis blancardella, Hyponomeuta padella, Plutella maculipennis, Malacosoma neustria, Euproctis chrysorrhoea,* Lymantria spp., *Bucculatrix thurberiella, Phyllocnistis citrella,* Agrotis spp., Euxoa spp., Feltia spp., *Earias insulana,* Heliothis spp., *Spodoptera exigua, Mamestra brassicae, Panolis flammea, Prodenia litura,* Spodoptera spp., *Trichoplusia ni, Carpocapsa pomonella,* Pieris spp., Chilo spp., *Pyrausta nubilalis, Ephestia kuehniella, Galleria mellonella, Tineola bisselliella, Tinea pellionella, Hofmannophila pseudospretella, Cacoecia podana, Capua reticulana, Choristoneura fumiferana, Clysia ambiguella, Homona magnanima* and *Tortrix viridana;* from the order of the Coleoptera, for example, *Anobium punctatum, Rhizopertha dominica, Acanthoscelides obtectus, Bruchidius obtectus, Hylotrupes bajulus, Agelastica alni, Leptinotarsa decemlineata, Phaedon cochleariae,* Diabrotica spp., *Psylliodes chrysocephala, Epilachna varivestis,* Atomaria spp., *Oryzaephilus surinamensis,* Anthonomus spp., Sitophilus spp., *Otiorrhynchus sulcatus, Cosmopolites sordidus, Ceuthorrhynchus assimilis, Hypera postica,* Dermestes spp., Trogoderma spp., Anthrenus spp., Attagenus spp., Lyctus spp., *Meligethes aeneus,* Ptinus spp., *Niptus hololeucus, Gibbium psylloides,* Tribolium spp., *Tenebrio molitor,* Agriotes spp., Conoderus spp., *Melolontha melolontha, Amphimallon solstitialis* and *Costelytra zealandica;* from the order of the Hymenoptera, for example, Diprion spp., Hoplocampa spp., Lasius spp., *Monomorium pharaonis* and Vespa spp.; from the order of the Diptera, for example, Aedes spp., Anopheles spp., Culex spp., *Drosophila melanogaster,* Musca spp., Fannia spp., *Calliphora erythrocephala,* Lucilia spp., Chrysomyia spp., Cuterebra spp., Gastrophilus spp., Hyppobosca spp., Stomoxys spp., Oestrus spp., Hypoderma spp., Tabanus spp., Tannia spp., *Bibio hortulanus, Oscinella frit,* Phorbia spp., *Pegomyia hyoscyami, Ceratitis capitata, Dacus oleae* and *Tipula paludosa;* from the order of the Siphonaptera, for example, *Xenopsylla cheopis* and Ceratophyllus spp; from the order of the Arachnida, for example, *Scorpio maurus* and *Latrodectus mactans;* from the order of the Acarina, for example, *Acarus siro,* Argas spp., Ornithodoros spp., *Dermanyssus gallinae, Eriophyes ribis, Phyllocoptruta oleivora,* Boophilus spp., Rhipicephalus spp., Amblyomma spp., Hyalomma spp., Ixodes spp., Psoroptes spp., Chorioptes spp., Sarcoptes spp., Tarsonemus spp., *Bryobia praetiosa,* Panonychus spp. and Tetranychus spp.

The phytoparasitic nematodes include, for example, Pratylenchus spp., Radopholus spp., Ditylenchus spp., Tylenchulus spp., Heterodera spp., Globodera spp., Meloidogyne spp., Aphelenchoides spp., Longidorus spp., Xiphinema spp., Trichodorus spp., Tylenchus spp., Helicotylenchus spp., Rotylenchus spp., Tylenchulus spp.

The active compounds according to the invention can be employed here very successfully, for example, against butterfly larvae, such as, for example, *Plutella maculipennis.*

The active compounds can be converted into the customary formulations, such as solutions, emulsions, wettable powders, suspensions, powders, dusting agents, pastes, soluble powders, granules, suspo-emulsion concentrates,

natural and synthetic materials impregnated with active compound, and very fine capsules in polymeric substances.

These formulations are produced in a known manner, for example by mixing the active compounds with extenders, that is liquid solvents and/or solid carriers, optionally with the use of surfactants, that is emulsifiers and/or dispersing agents and/or foam-forming agents.

If the extender used is water, it is also possible to employ, for example, organic solvents as auxiliary solvents. Suitable liquid solvents are essentially: aromatics, such as xylene, toluene or alkylnaphthalenes, chlorinated aromatics and chlorinated aliphatic hydrocarbons, such as chlorobenzenes, chloroethylenes or methylene chloride, aliphatic hydrocarbons, such as cyclohexane or paraffins, for example petroleum fractions, mineral and vegetable oils, alcohols, such as butanol or glycol as well as their ethers and esters, ketones, such as acetone, methyl ethyl ketone, methyl isobutyl ketone or cyclohexanone, strongly polar solvents, such as dimethylformamide and dimethyl sulphoxide, and also water.

Suitable solid carriers are: for example ammonium salts and ground natural minerals, such as kaolins, clays, talc, chalk, quartz, attapulgite, montmorillonite or diatomaceous earth, and ground synthetic minerals, such as highly disperse silica, alumina and silicates, as solid carriers for granules there are suitable: for example crushed and fractionated natural rocks such as calcite, marble, pumice, sepiolite and dolomite, as well as synthetic granules of inorganic and organic meals, and granules of organic material such as sawdust, coconut shells, maize cobs and tobacco stalks; as emulsifying and/or foam-forming agents there are suitable: for example nonionic and anionic emulsifiers, such as polyoxyethylene fatty acid esters, polyoxyethylene fatty alcohol ethers, for example alkylaryl polyglycol ethers, alkylsulphonates, alkyl sulphates, arylsulphonates as well as protein hydrolysates; as dispersing agents there are suitable: for example lignin-sulphite waste liquors and methylcellulose.

Tackifiers such as carboxymethylcellulose and natural and synthetic polymers in the form of powders, granules or latices, such as gum arabic, polyvinyl alcohol and polyvinyl acetate, as well as natural phospholipids, such as cephalins and lecithins, and synthetic phospholipids, can be used in the formulations. Further additives can be mineral and vegetable oils.

It is possible to use colorants such as inorganic pigments, for example iron oxide, titanium oxide and Prussian Blue, and organic dyestuffs, such as alizarin dyestuffs, azo dyestuffs and metal phthalocyanine dyestuffs, and trace nutrients such as salts of iron, manganese, boron, copper, cobalt, molybdenum and zinc.

The formulations in general contain between 0.1 and 95 per cent by weight of active compound, preferably between 0.5 and 90%.

The active compounds according to the invention can be used as such or, in their formulations, also as a mixture with known herbicides for the control of weeds, in which case ready-to-use formulations or tank mixes are possible.

Suitable co-components for the mixtures are known herbicides, for example anilides such as, for example, diflufenican and propanil; arylcarboxylic acids such as, for example, dichloropicolinic acid, dicamba and picloram; aryloxyalkanoic acids such as, for example, 2,4-D, 2,4-DB, 2,4-DP, fluroxypyr, MCPA, MCPP and triclopyr; aryloxy-phenoxy-alkanoic esters such as, for example, diclofop-methyl, fenoxaprop-ethyl, fluazifop-butyl, haloxyfop-methyl and quizalofop-ethyl; azinones such as, for example, chloridazon and norflurazon; carbamates such as, for example, chlorpropham, desmedipham, phenmedipham and propham; chloroacetanilides such as, for example, alachlor, acetochlor, butachlor, metazachlor, metolachlor, pretilachlor and propachlor; dinitroanilines such as, for example, oryzalin, pendimethalin and trifluralin; diphenyl ethers such as, for example, acifluorfen, bifenox, fluoroglycofen, fomesafen, halosafen, lactofen and oxyfluorfen; ureas such as, for example, chlortoluron, diuron, fluometuron, isoproturon, linuron and methabenzthiazuron; hydroxylamines such as, for example, alloxydim, clethodim, cycloxydim, sethoxydim and tralkoxydim; imidazolinones such as, for example, imazethapyr, imazamethabenz, imazapyr and imazaquin; nitriles such as, for example, bromoxynil, dichlobenil and ioxynil; oxyacetamides such as, for example, mefenacet; sulphonylureas such as, for example, amidosulfuron, bensulfuron-methyl, chlorimuron-ethyl, chlorsulfuron, cinosulfuron, metsulfuron-methyl, nicosulfuron, primisulfuron, pyrazosulfuron-ethyl, thifensulfuron-methyl, triasulfuron and tribenuron-methyl; thiolcarbamates such as, for example, butylates, cycloates, di-allates, EPTC, esprocarb, molinates, prosulfocarb, thiobencarb and triallates; triazines such as, for example, atrazine, cyanazine, simazine, simetryne, terbutryne and terbutylazine; triazinones such as, for example, hexazinone, metamitron and metribuzin; others such as, for example, aminotriazole, benfuresate, bentazone, cinmethylin, clomazone, clopyralid, difenzoquat, dithiopyr, ethofumesate, fluorochloridone, glufosinate, glyphosate, isoxaben, pyridate, quinchlorac, quinmerac, sulphosate and tridiphane.

A mixture with other known active compounds, such as fungicides, insecticides, acaricides, nematicides, bird repellants, plant nutrients and agents which improve soil structure, is also possible.

The active compounds can be used as such, in the form of their formulations or in the use forms prepared therefrom by further dilution, such as ready-to-use solutions, suspensions, emulsions, powders, pastes and granules. They are used in the customary manner, for example by watering, spraying, atomizing or scattering.

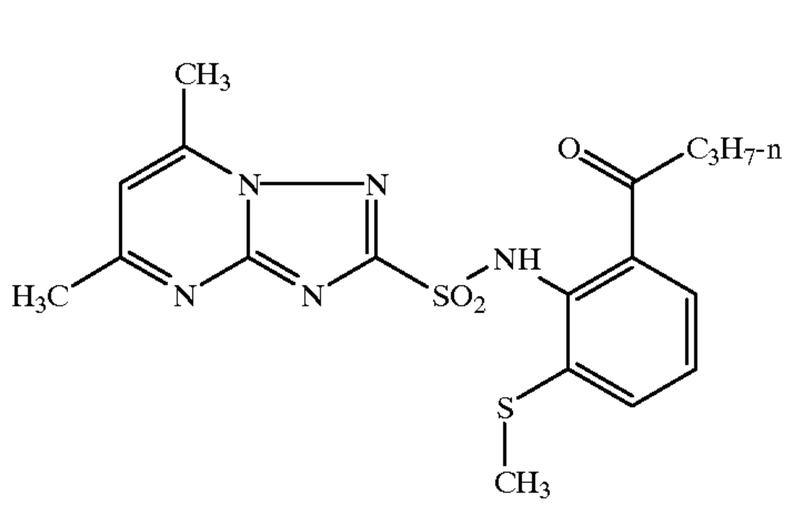
The active compounds according to the invention can be applied either before or after emergence of the plants. They can also be incorporated into the soil before sowing.

The amount of active compound used can vary within a substantial range. It depends essentially on the nature of the desired effect. In general, the application rates are between 1 g and 10 kg of active compound per hectare of soil surface, preferably between 5 g and 5 kg per ha.

The preparation and the use of the active compounds according to the invention can be seen from the examples below.

PREPARATION EXAMPLES

Example 1

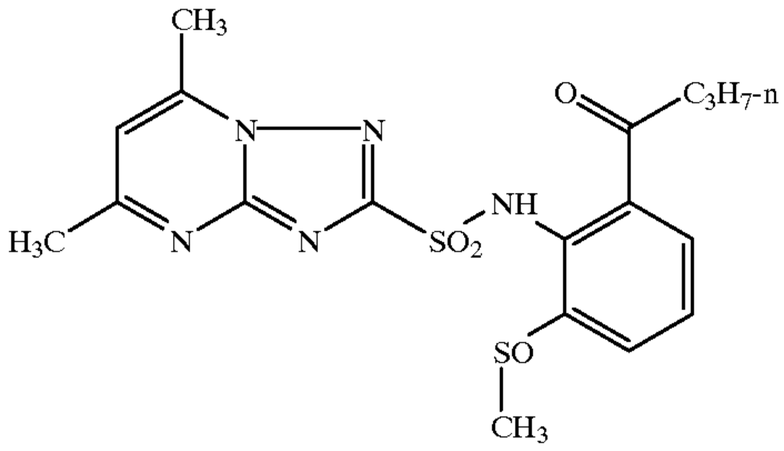


At room temperature (approximately 20° C.), a mixture of 2.1 g (10 mmol) of 2-methylthio-6-n-butyroyl-aniline, 2.5 g (10 mmol) of 5,7-dimethyl-1,2,4-triazolo[1,5-a]pyrimdine-2-sulphonyl chloride and 30 ml of pyridine is stirred for approximately 15 hours. The pyridine is subsequently care-

fully distilled off under water pump vacuum and the residue is taken up with 100 ml of methylene chloride and washed twice each with 2N hydrochloric acid and with water, dried with magnesium sulphate and filtered. The filtrate is concentrated under water pump vacuum, the amorphous residue is crystallized by treatment with ethanol and the product is isolated by filtration with suction.

This gives 2.8 g (67% of theory) of 5,7-dimethyl-N-(2-methylthio-6-n-butyroyl-phenyl)-1,2,4-triazolo[1,5-a] pyrimidine-2-sulphonamide of melting point 138° C.

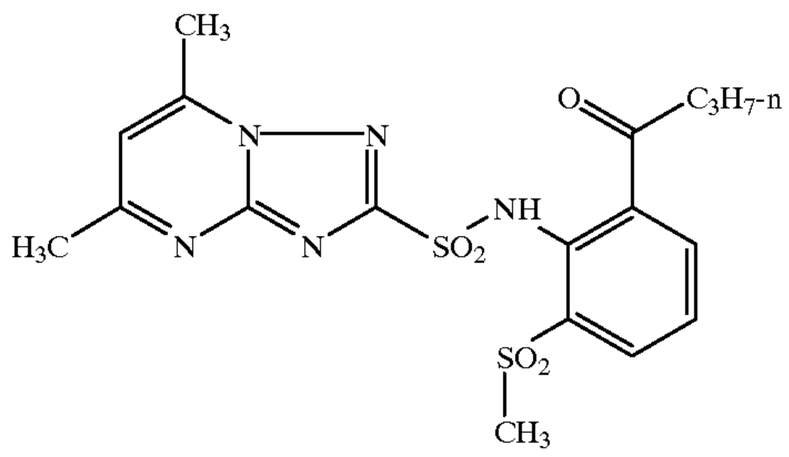
Example 2



3.2 g (7.5 mmol) of 5,7-dimethyl-N-(2-methylthio-6-n-butyroyl-phenyl)- 1,2,4-triazolo[1,5-a]pyrimidine-2-sulphonamide are initially charged in 60 ml of chloroform, and the solution is admixed with 1.8 g of 3-chloroperbenzoic acid (70% strength). The reaction mixture is then stirred at room temperature (approximately 20° C.) for approximately 60 minutes and subsequently concentrated under water pump vacuum. The residue is digested with 40 ml of ethanol and the resulting crystalline product is isolated by filtration with suction.

This gives 2,3 g (70% of theory) of 5,7-dimethyl-N-(2-methylsulphinyl-6-n-butyroyl-phenyl)-1,2,4-triazolo[1,5-a] pyrimidine-2-sulphonamide of melting point 255° C. (with decomposition).

Example 3



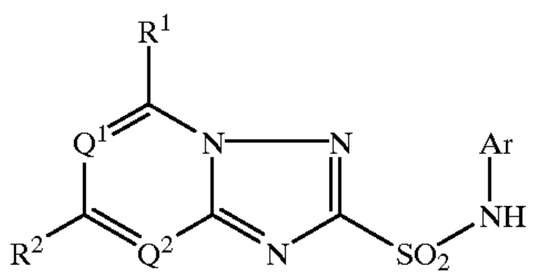
2.1 g (5 mmol) of 5,7-dimethyl-N-(2-methylthio-6-n-butyroyl-phenyl)- 1,2,4-triazolo[1,5-a]pyrimidine-2-sulphonamide are initially charged in 50 ml of chloroform, and the solution is admixed with 2.8 g of 3-chloroperbenzoic acid (70% strength). The reaction mixture is then stirred at room temperature (approximately 20° C.) for approximately 2 hours and subsequently concentrated under water pump vacuum. The residue is digested with 30 ml of ethanol and the resulting crystalline product is isolated by filtration with suction.

This gives 2.0 g (89% of theory) of 5,7-dimethyl-N-(2-methylsulphonyl-6-n-butyroyl-phenyl)-1,2,4-triazolo[1,5-a] pyrimidine-2-sulphonamide of melting point 236° C. (with decomposition).

Similarly to the Preparation Examples 1 to 3, and in accordance with the general description of the preparation processes according to the invention, it is also possible to prepare, for example, the compounds of the formula (I) listed in Table 1 below.

TABLE 1

(I)



Examples of compounds of the formula (I)

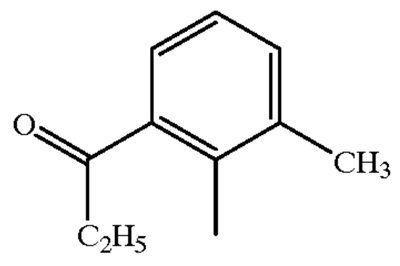
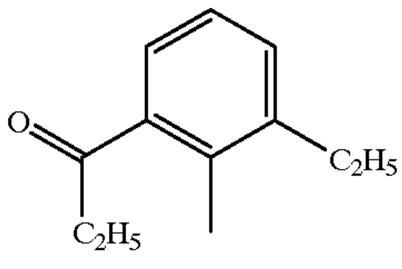
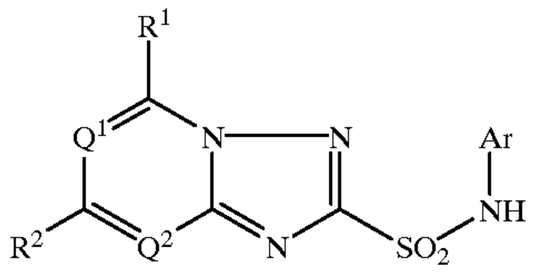
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
4	CH	N	CH_3	CH_3		169
5	CH	N	CH_3	CH_3		218

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

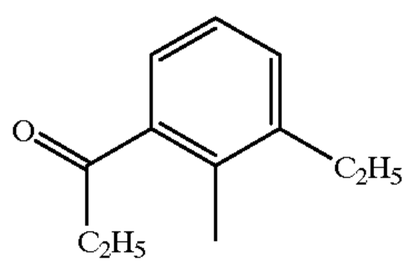
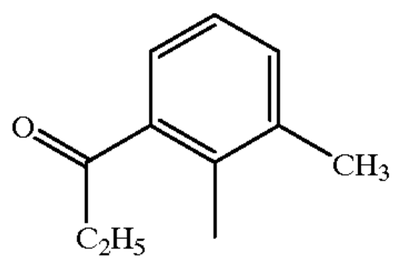
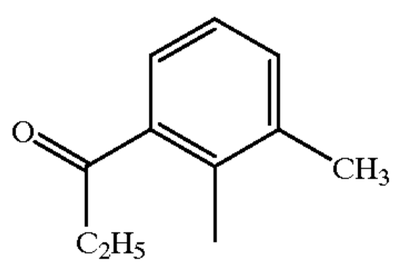
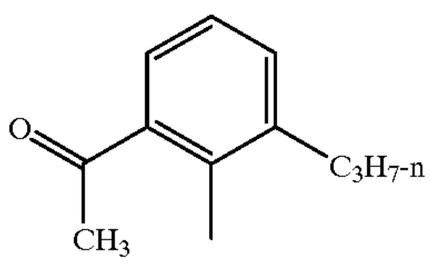
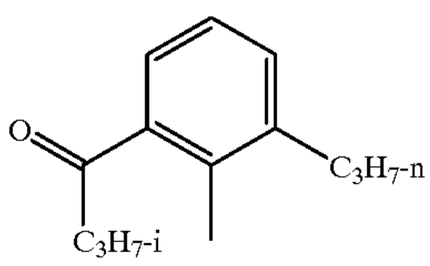
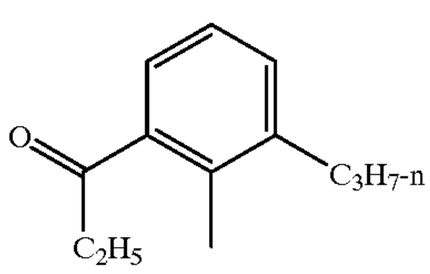
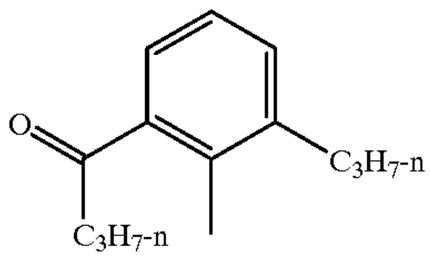
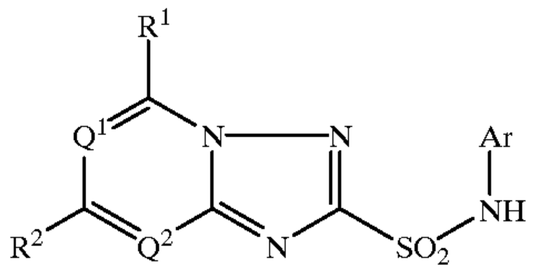
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
6	CH	N	CF_3	CH_3		179
7	CH	N	CF_3	CF_3		102
8	CH	N	CF_3	CH_3		206
9	CH	N	CH_3	CH_3		179
10	CH	N	CH_3	CH_3		146
11	CH	N	CH_3	CH_3		155
12	CH	N	CH_3	CH_3		111

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

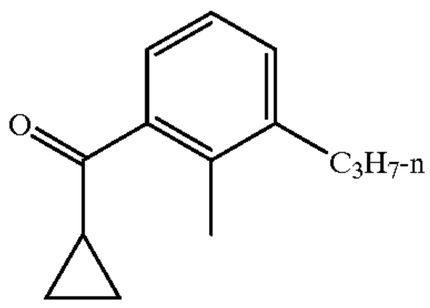
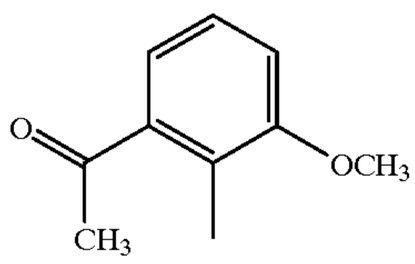
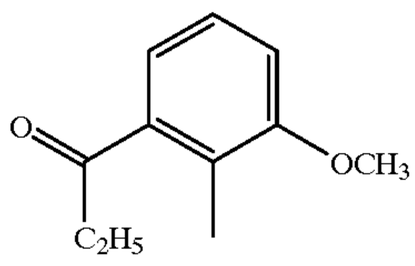
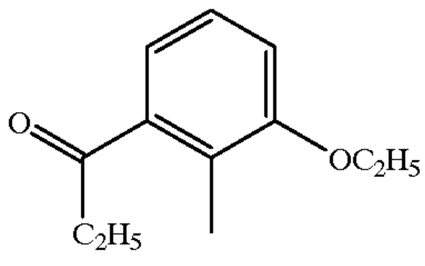
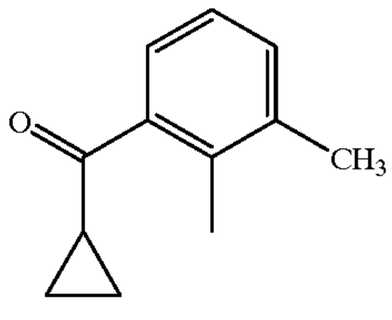
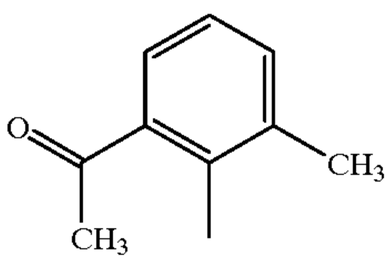
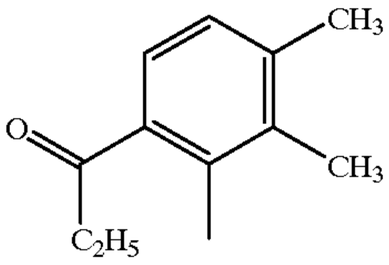
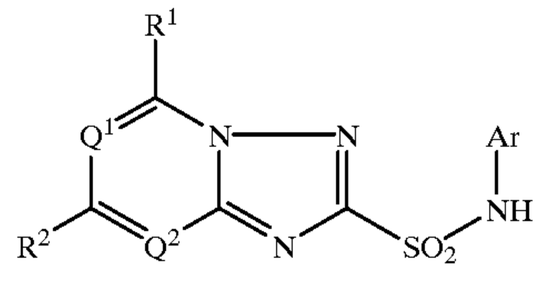
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
13	CH	N	CH_3	CH_3		181
14	CH	N	CH_3	CH_3		201
15	CH	N	CH_3	CH_3		186
16	CH	N	CH_3	CH_3		178
17	CH	N	CH_3	CH_3		235
18	CH	N	CH_3	CH_3		258
19	CH	N	CH_3	CH_3		248

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

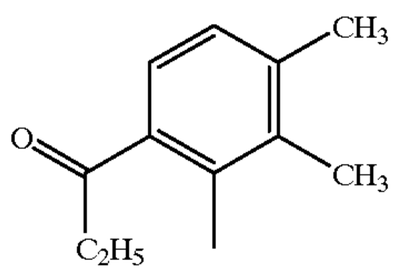
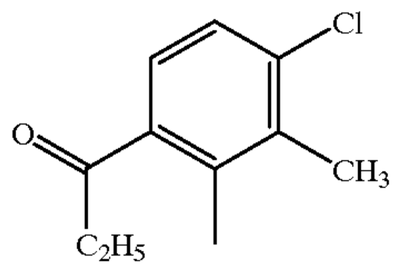
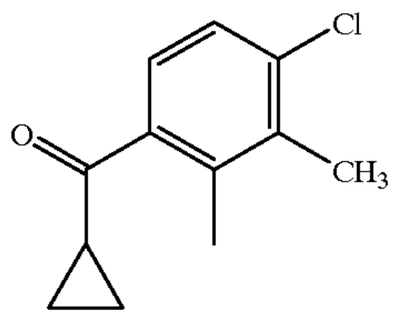
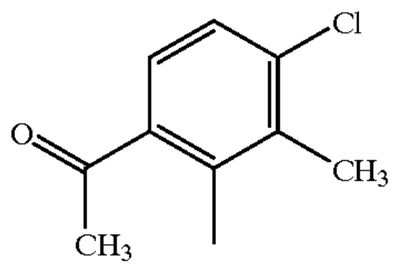
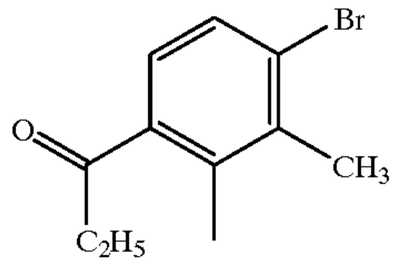
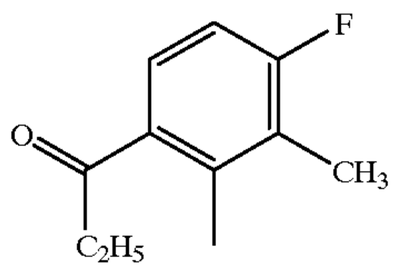
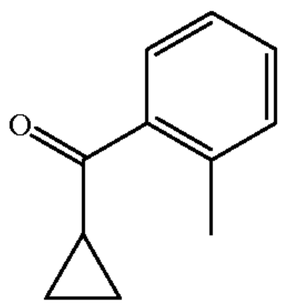
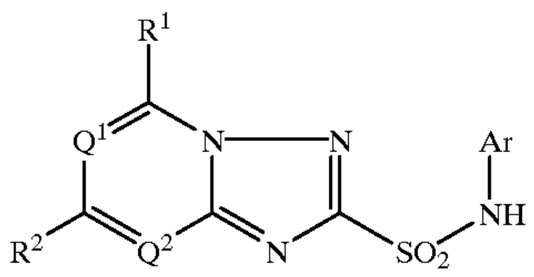
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
20	CH	N	CF_3	CH_3		184
21	CH	N	CH_3	CH_3		182
22	CH	N	CH_3	CH_3		193
23	CH	N	CH_3	CH_3		186
24	CH	N	CH_3	CH_3		184
25	CH	N	CH_3	CH_3		168
26	CH	N	CH_3	CH_3		172

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

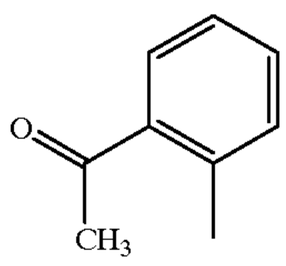
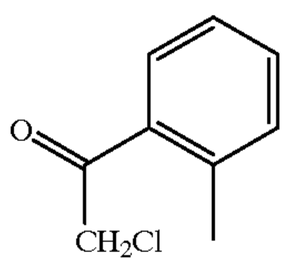
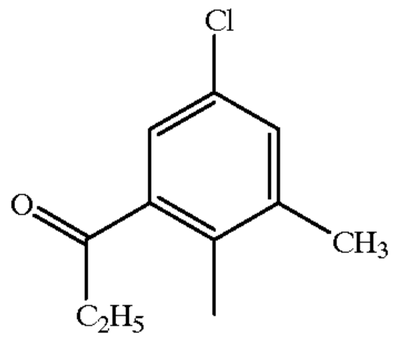
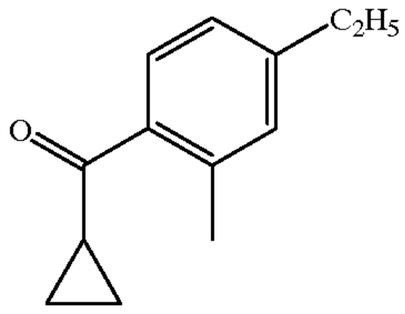
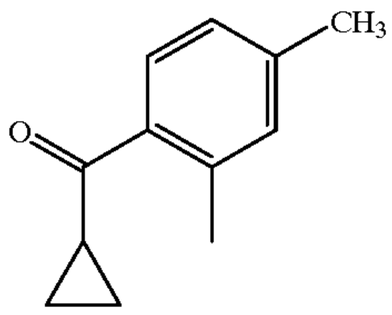
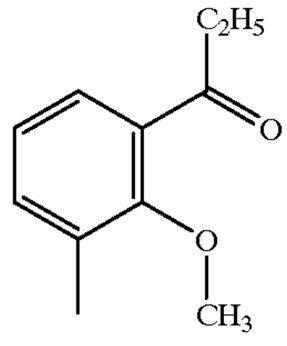
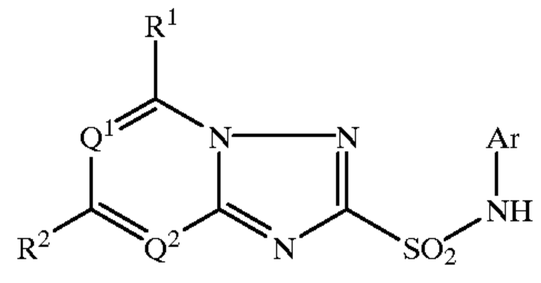
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
27	CH	N	CH_3	CH_3		179
28	CH	N	CH_3	CH_3		245
29	CH	N	CH_3	CH_3		197
30	CH	N	CH_3	CH_3		135
31	CH	N	CH_3	CH_3		159
32	CH	N	CH_3	CH_3		177

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

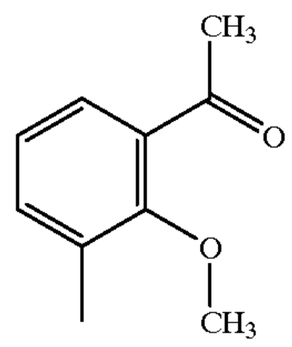
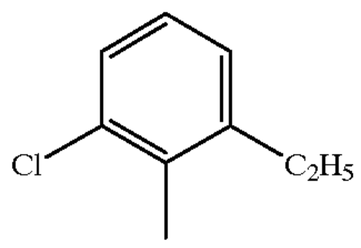
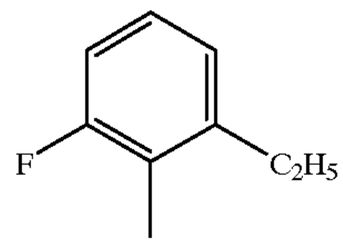
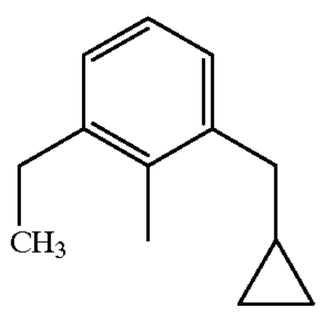
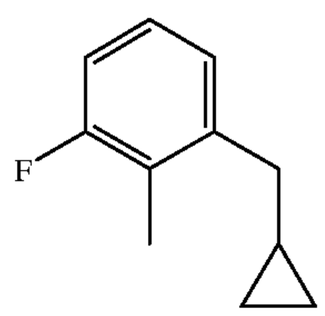
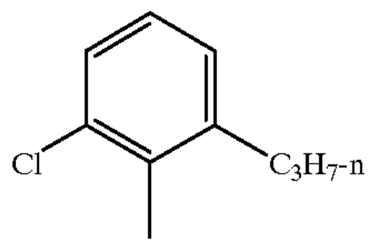
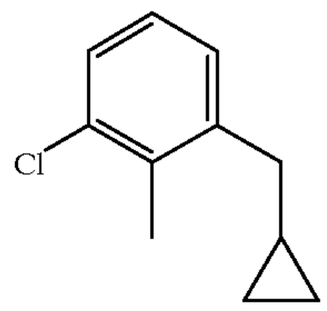
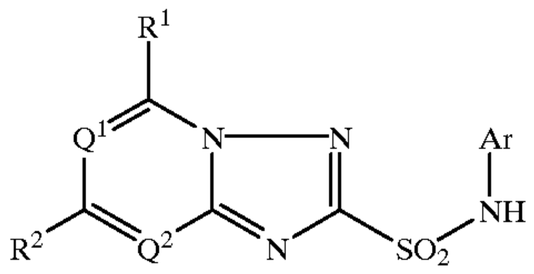
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
33	CH	N	CH_3	CH_3		246
34	CH	N	CH_3	CH_3		234
35	CH	N	CH_3	CH_3		238
36	CH	N	CH_3	CH_3		210
37	CH	N	CH_3	CH_3		246
38	CH	N	CH_3	CH_3		225
39	CH	N	CH_3	CH_3		254

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

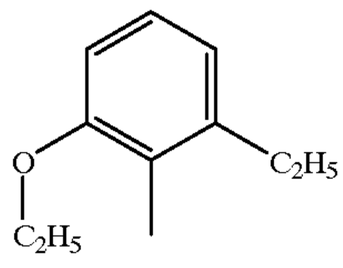
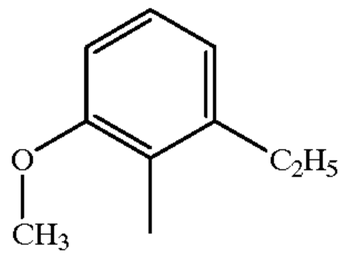
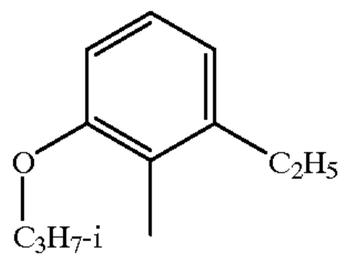
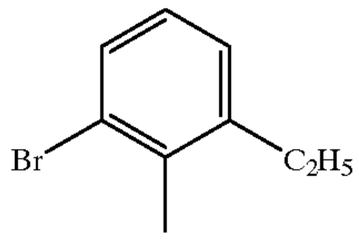
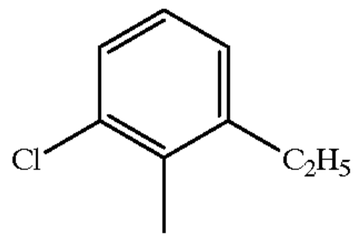
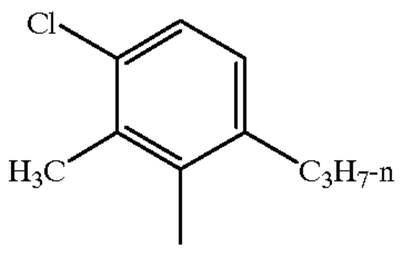
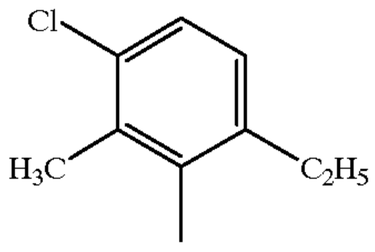
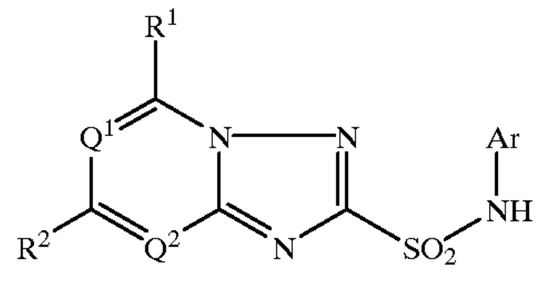
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
40	CH	N	CH_3	CH_3		179
41	CH	N	CH_3	CH_3		234
42	CH	N	CH_3	CH_3		206
43	CH	N	CH_3	CH_3		224
44	CH	N	CH_2OH	CH_3		206
45	CH	N	CH_3	CH_3		207
46	CH	N	CH_3	CH_3		277

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

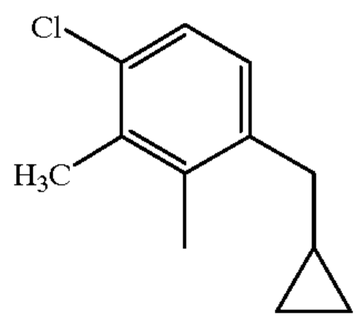
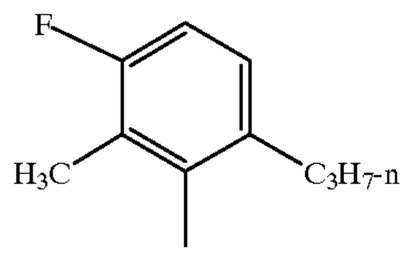
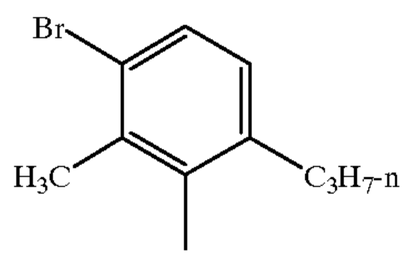
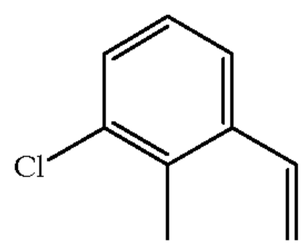
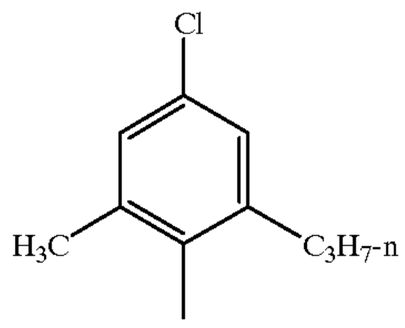
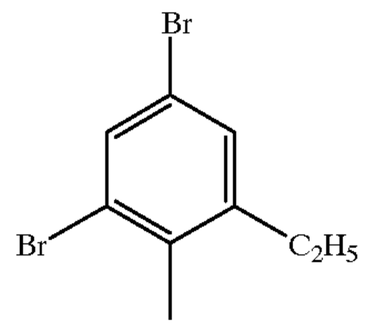
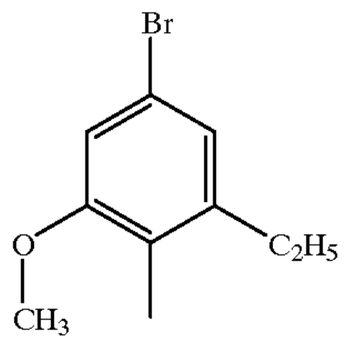
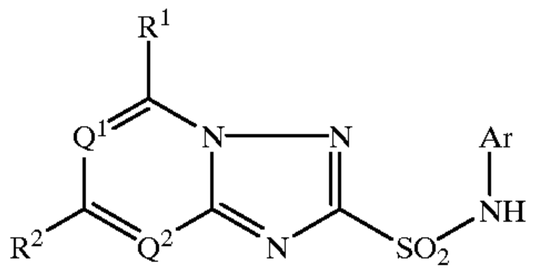
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
47	CH	N	CH_3	CH_3		218
48	CH	N	CH_3	CH_3		205
49	CH	N	CH_3	CH_3		204
50	CH	N	CH_3	CH_3		233
51	CH	N	CH_3	CH_3		168
52	CH	N	CH_3	CH_3		239
53	CH	N	CH_3	CH_3		217

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

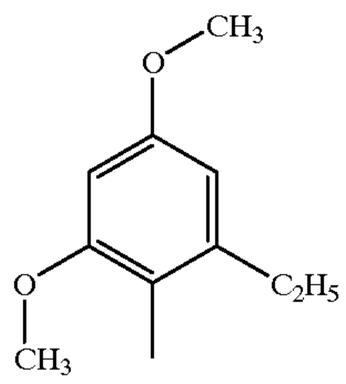
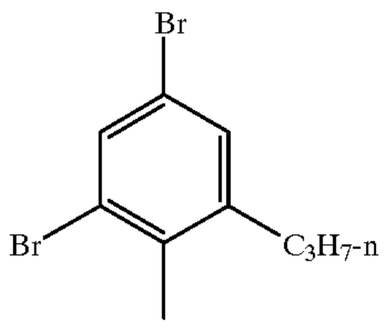
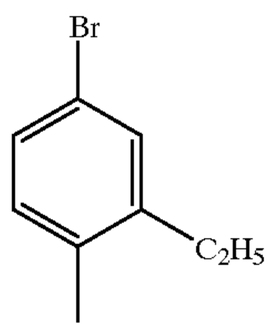
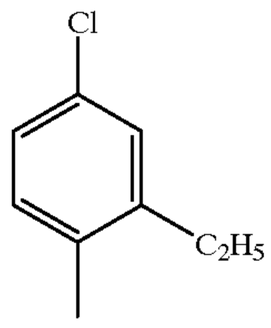
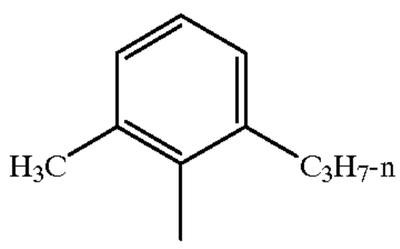
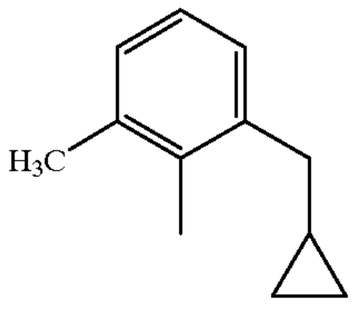
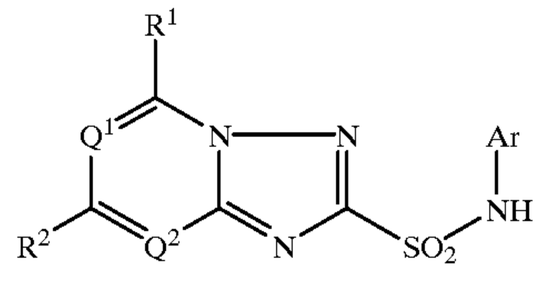
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
54	CH	N	CH_3	CH_3		224
55	CH	N	CH_3	CH_3		226
56	CH	N	CH_3	CH_3		219
57	CH	N	CH_3	CH_3		231
58	CH	N	CH_3	CH_3		237
59	CH	N	CH_3	CH_3		256

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

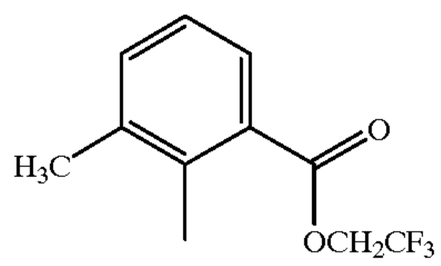
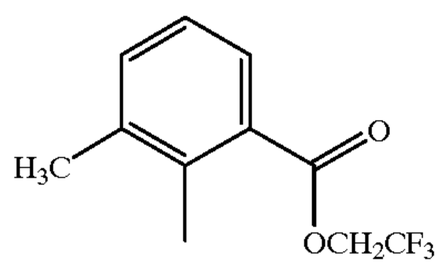
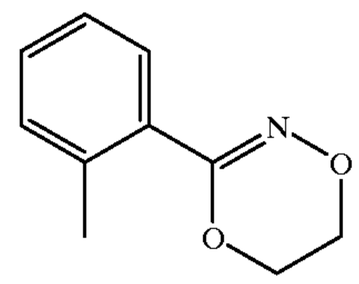
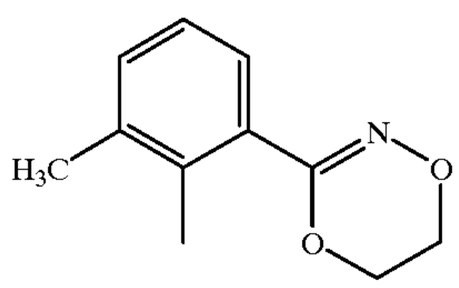
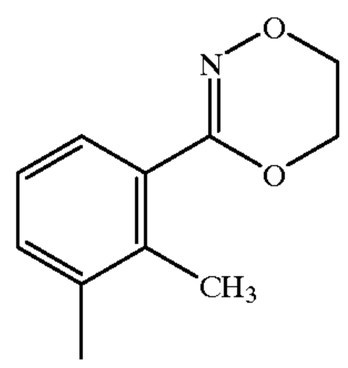
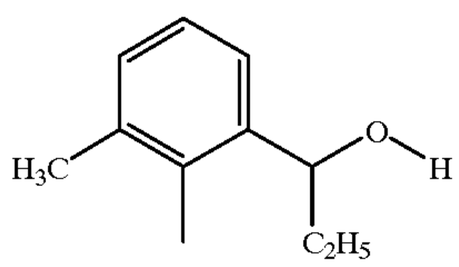
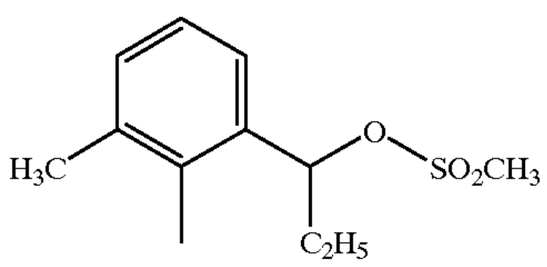
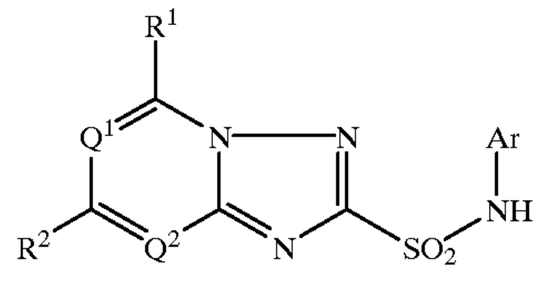
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
60	CH	N	CH_3	CH_3		154
61	CH	N	CF_3	CH_3		101
62	CH	N	CH_3	CH_3		
63	CH	N	CH_3	CH_3		
64	CH	N	CH_3	CH_3		
65	CH	N	CH_3	CH_3		222
66	CH	N	CH_3	CH_3		245

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

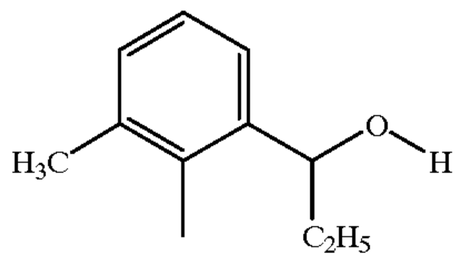
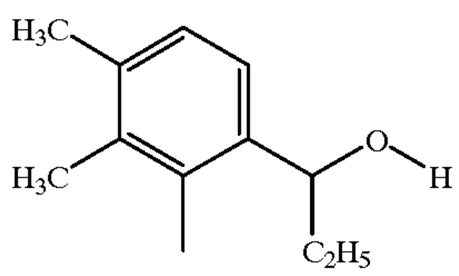
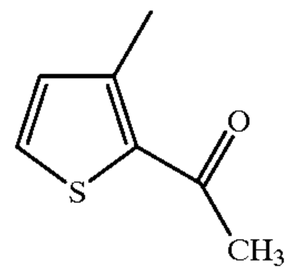
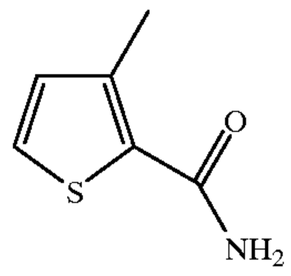
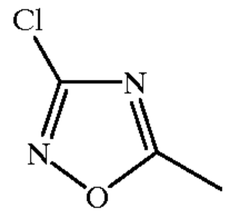
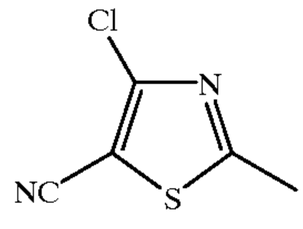
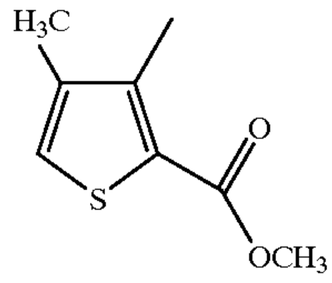
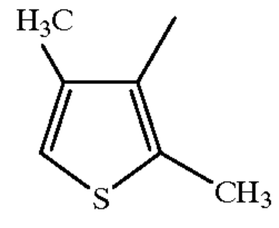
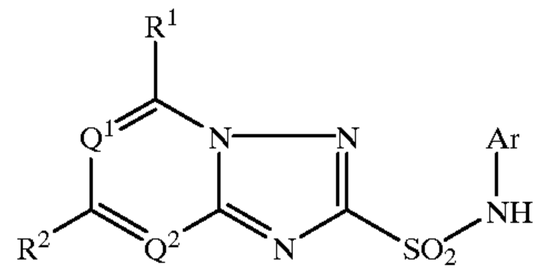
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
67	CH	N	CF_3	CF_3		88
68	CH	N	CH_3	CH_3		237
69	CH	N	CH_3	CH_3		111
70	CH	N	CH_3	CH_3		214
71	CH	N	CH_3	CH_3		112
72	CH	N	CH_3	CH_3		59
73	CH	N	CH_3	CH_3		222
74	CH	N	CH_3	CH_3		246

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

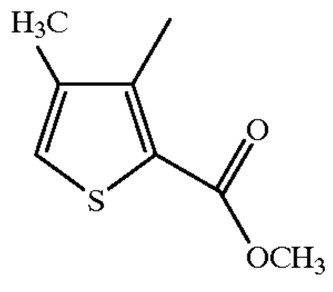
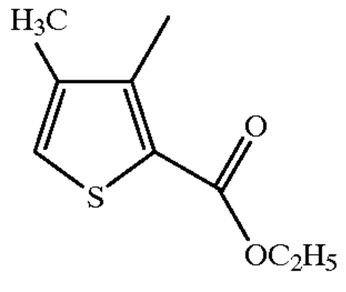
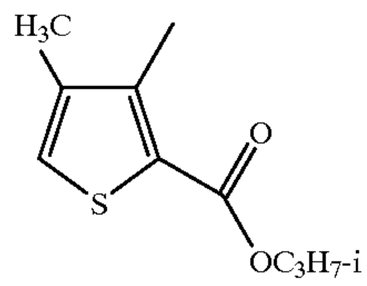
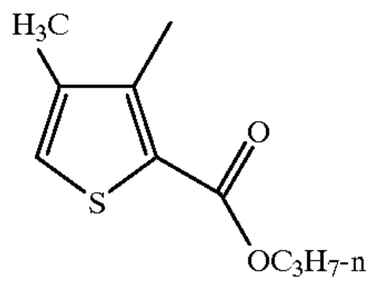
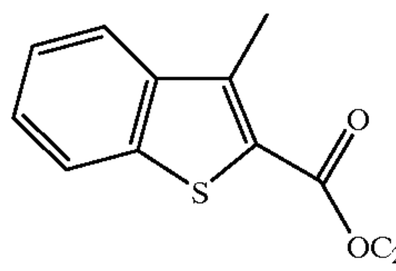
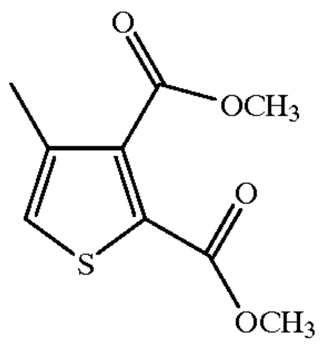
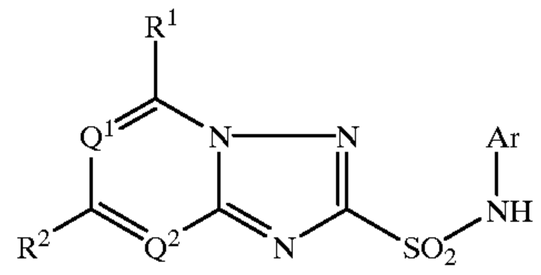
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
75	CH	N	CF_3	CH_3		187
76	CH	N	CH_3	CH_3		172
77	CH	N	CH_3	CH_3		101
78	CH	N	CH_3	CH_3		90
79	CH	N	CH_2OCH_3	CH_3		
80	CH	N	CH_2OCH_3	CH_3		89

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

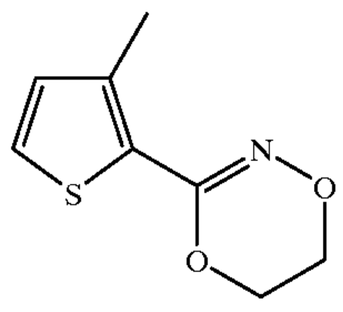
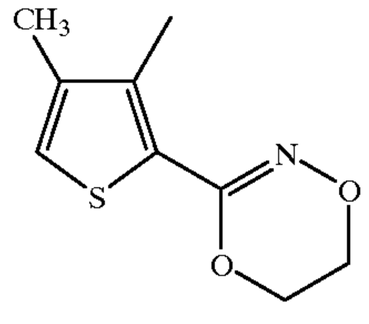
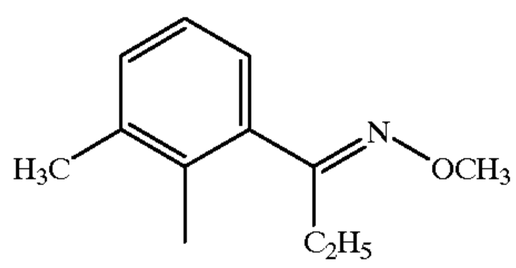
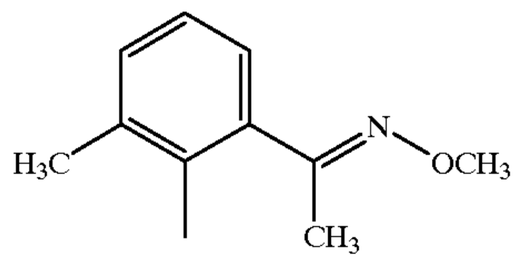
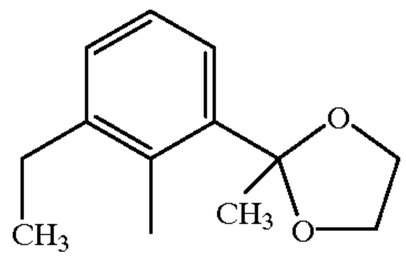
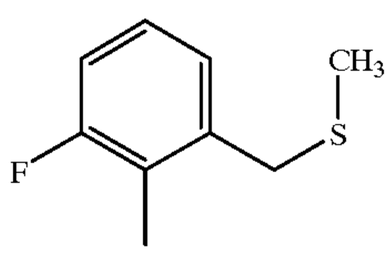
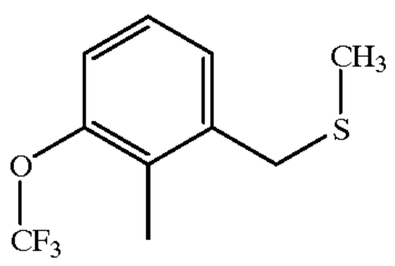
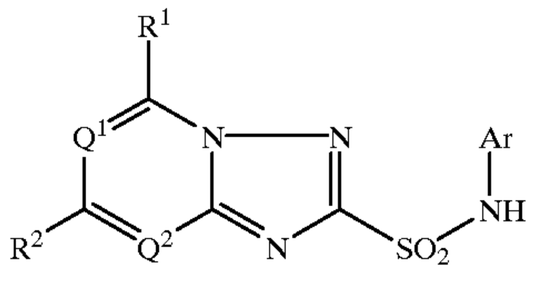
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
81	CH	N	CH_3	CH_3		
82	CH	N	CH_3	CH_3		
83	CH	N	CF_3	CH_3		179
84	CH	N	CH_3	CH_3		192
85	CH	N	CH_3	CH_3		186
86	CH	N	CH_3	CH_3		209
87	CH	N	CH_3	CH_3		223

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

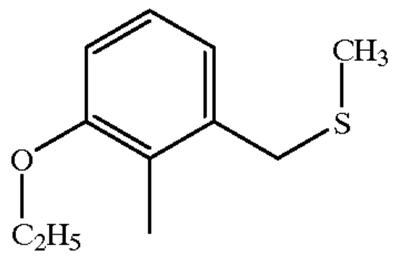
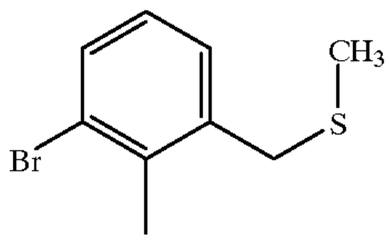
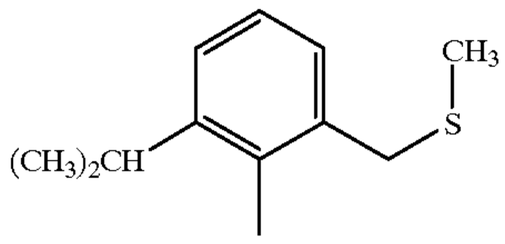
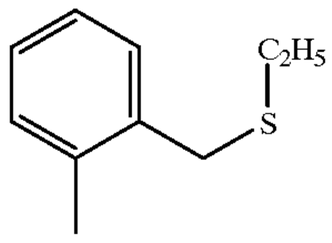
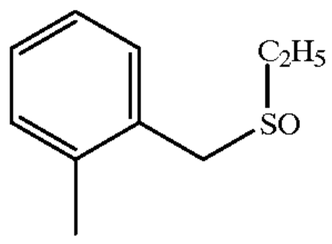
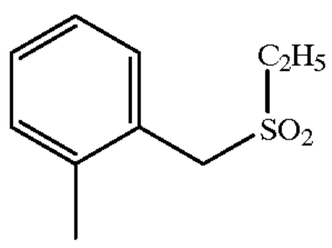
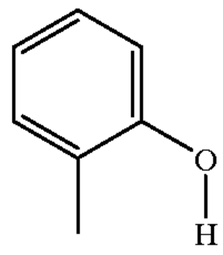
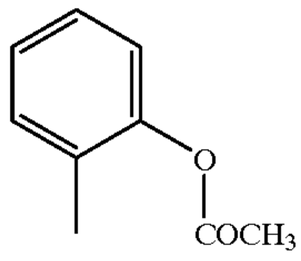
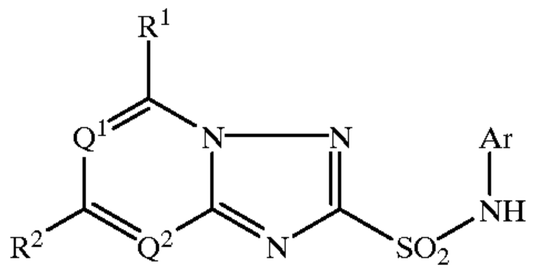
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
88	CH	N	CH_3	CH_3		161
89	CH	N	CH_3	CH_3		206
90	CH	N	CH_3	CH_3		226
91	CH	N	CH_3	CH_3		133
92	CH	N	CH_3	CH_3		178
93	CH	N	CH_3	CH_3		210
94	CH	N	CH_3	CH_3		168
95	CH	N	CH_3	CH_3		185

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

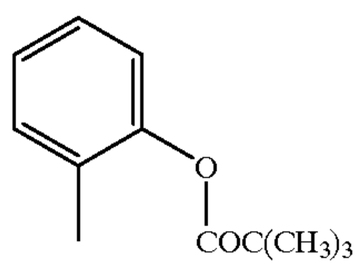
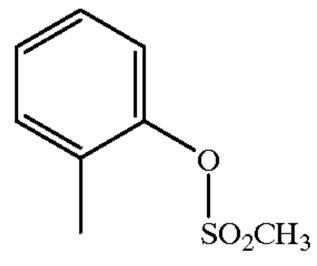
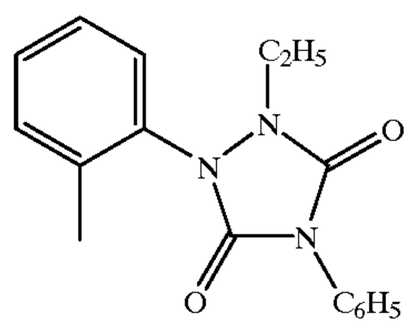
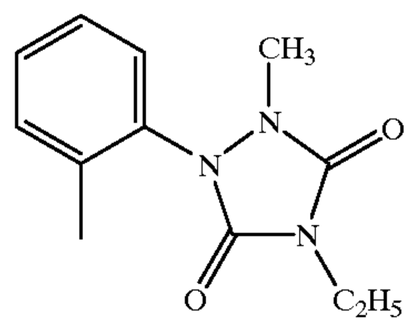
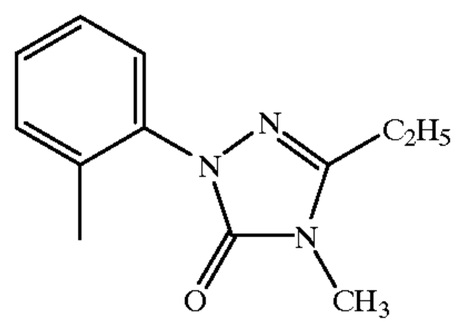
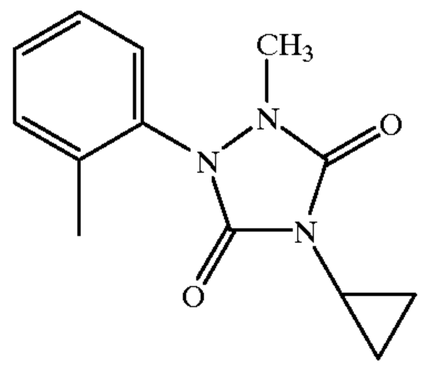
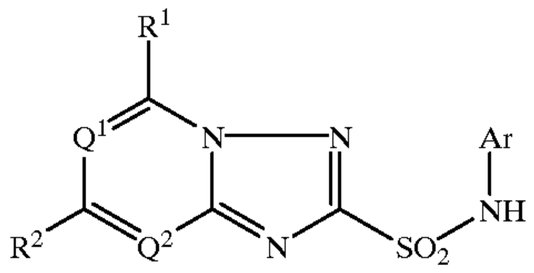
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
96	CH	N	CH_3	CH_3		172
97	CH	N	CH_3	CH_3		130
98	CH	N	CH_3	CH_3		180
99	CH	N	CH_3	CH_3		163
100	CH	N	CH_3	CH_3		208
101	CH	N	CH_3	CH_3		190

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

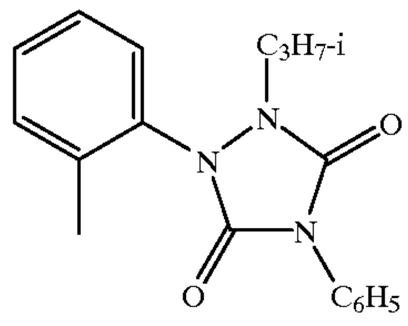
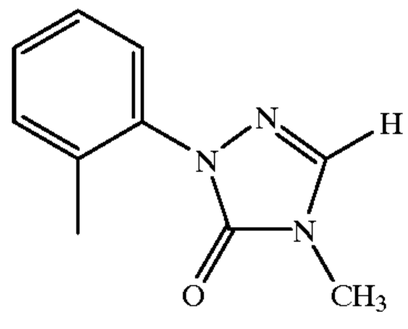
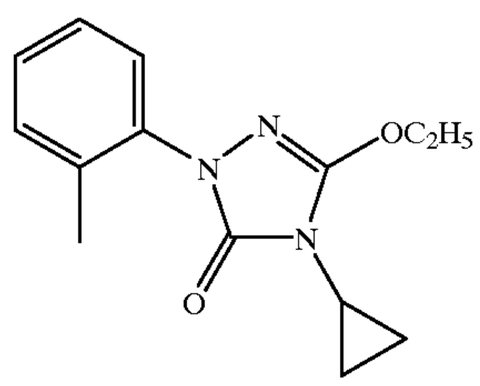
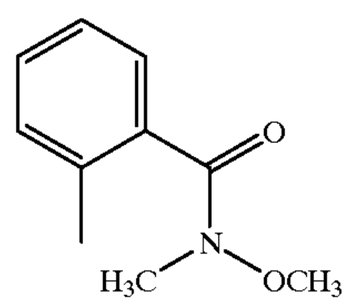
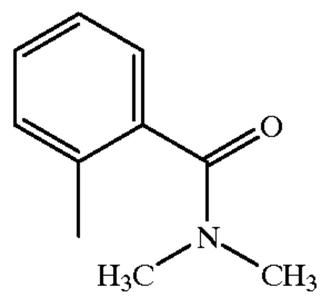
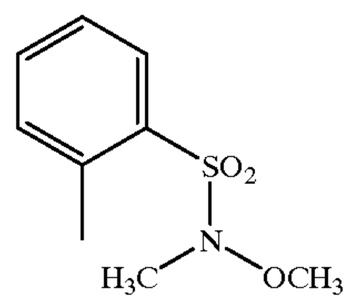
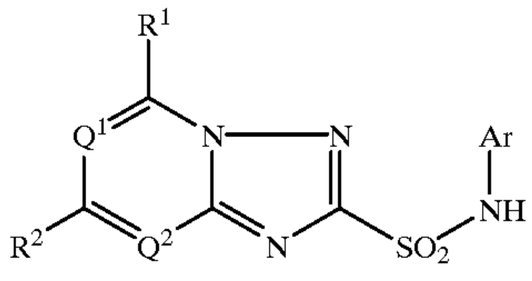
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
102	CH	N	CH_3	CH_3		200
103	CH	N	CH_3	CH_3		228
104	CH	N	CH_3	CH_3		233
105	CH	N	CH_3	CH_3		226
106	CH	N	CH_3	CH_3		168
107	CH	N	CH_3	CH_3		195

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

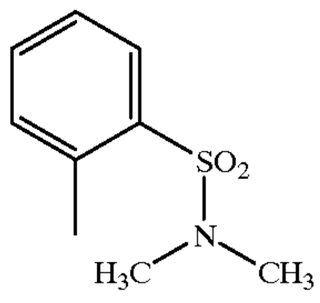
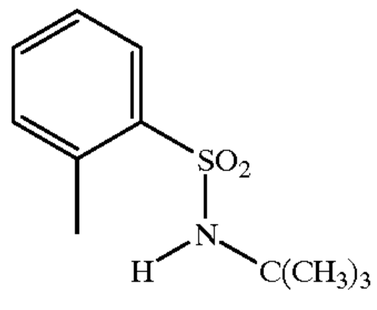
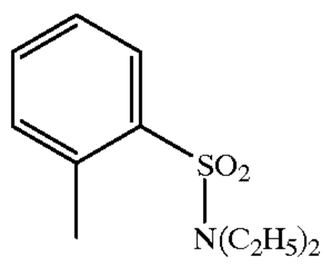
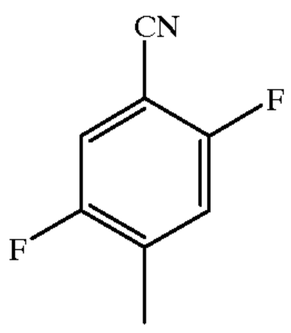
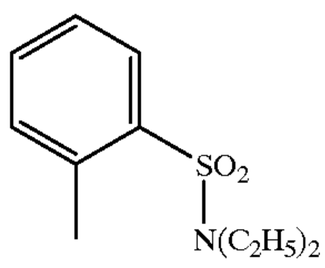
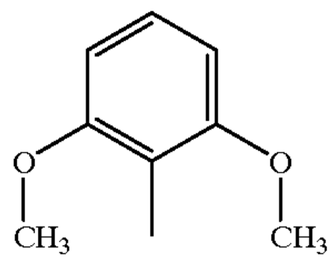
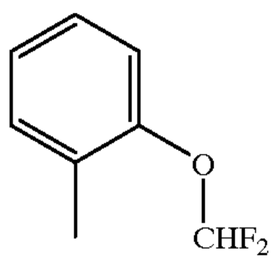
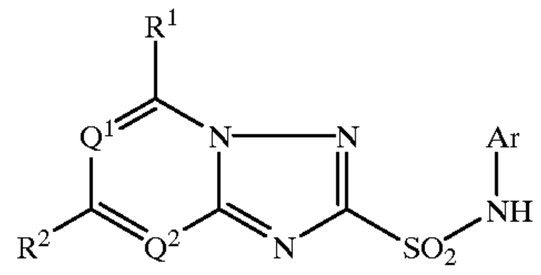
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
108	CH	N	CH_3	CH_3		105
109	CH	N	CH_3	CH_3		103
110	CH	N	CH_3	CH_3		
111	CH	N	CH_3	CH_3		
112	CH	N	CH_3	CH_3		188
113	CH	N	CH_3	CH_3		243
114	CH	N	CH_3	CH_3		215

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

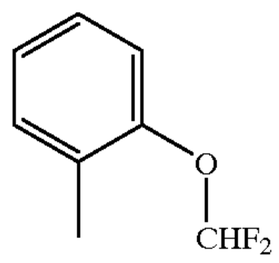
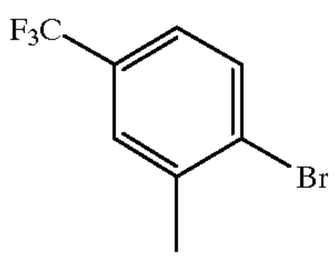
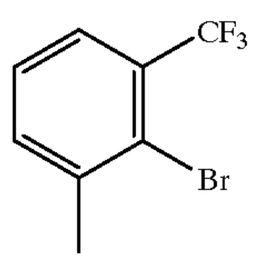
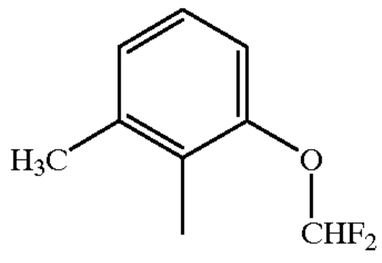
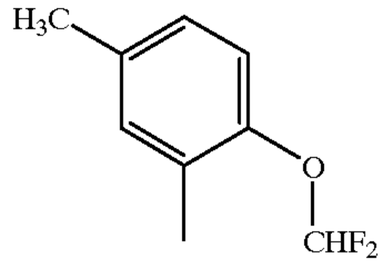
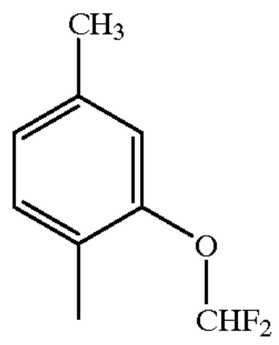
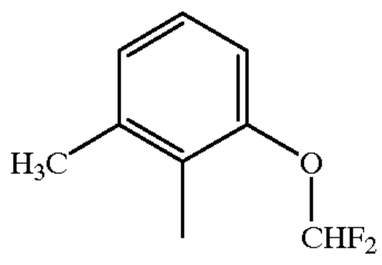
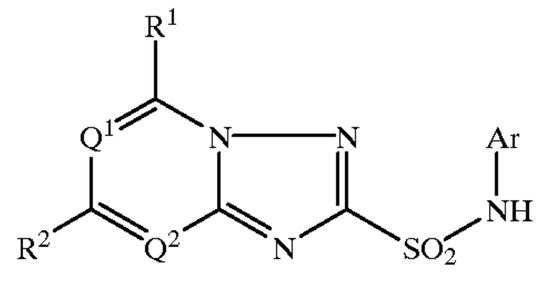
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
115	CH	N	CF_3	CH_3		158
116	CH	N	CH_3	CH_3		211
117	CH	N	CH_3	CH_3		192
118	CH	N	CH_3	CH_3		232
119	CH	N	CH_3	CH_3		207
120	CH	N	CH_3	CH_3		215
121	CH	N	CF_3	CH_3		204

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

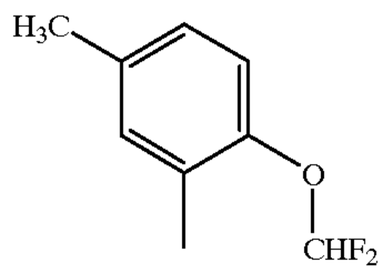
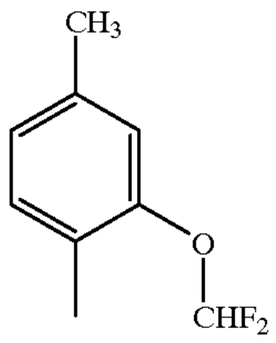
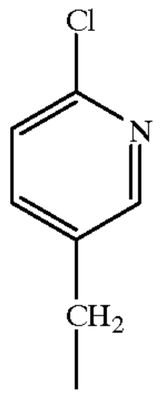
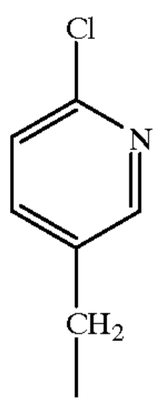
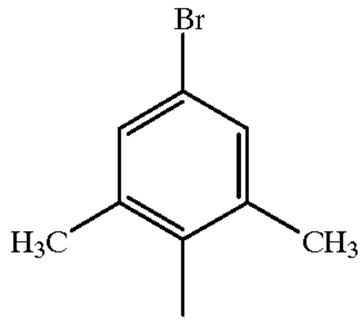
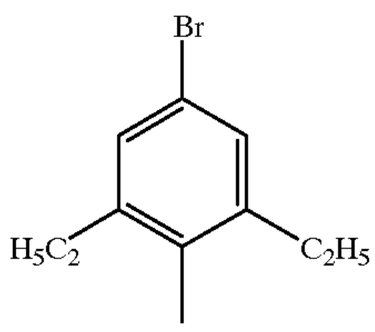
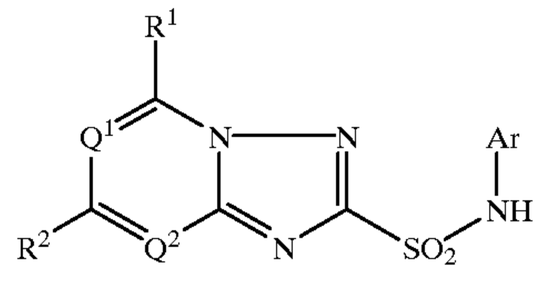
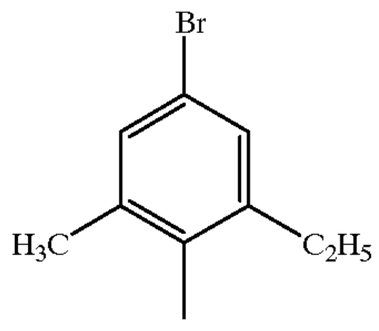
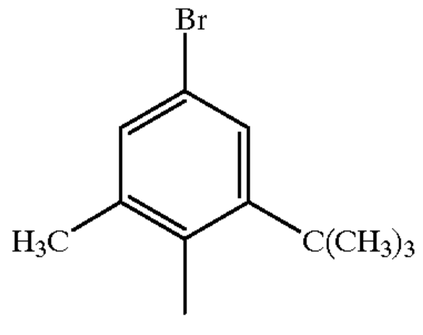
Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
122	CH	N	CF_3	CH_3		163
123	CH	N	CF_3	CH_3		163
124	CH	N	CH_3	CH_3		204
125	CH	N	CF_3	CH_3		155
126	CH	N	CH_3	CH_3		250
127	CH	N	CH_3	CH_3		219

TABLE 1-continued

(I)



Examples of compounds of the formula (I)

Ex. No.	Q^1	Q^2	R^1	R^2	Ar	Melting point (° C.)
128	CH	N	CH_3	CH_3		232
129	CN	N	CH_3	CH_3		186

Use Examples

Example A

Pre-emergence test

Solvent: 5 parts by weight of acetone

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent, the stated amount of emulsifier is added and the concentrate is diluted with water to the desired concentration.

Seeds of the test plants are sown in normal soil. After approximately 24 hours, the preparation of active compound is sprayed onto the soil—in such a way as to apply the particular amounts of active compound desired per unit area. The concentration of the spray liquor is chosen so that the particular desired amounts of active compound are applied in 1000 l of water/ha.

After three weeks, the degree of damage to the plants is rated in % damage by comparison with the development of the untreated control.

The figures denote:

0%=no effect (like untreated control)

100%=total destruction

In this test, for example, the compounds of Preparation Example 4, 5, 6, 13, 14, 17, 18, 19, 22, 23, 25, 34, 35, 38, 39, 43, 60, 63, 73, 74, 75, 76, 77, 82, 84, 85, 104, 115, 118 and 121 show strong activity against weeds (cf. the tables below for Example A), and some of them are tolerated well by crop plants, such as, for example, wheat, soya and cotton.

Tables for Example A

Pre-emergence test/greenhouse

1) Compound of Preparation Ex. No.	Application rate (g ai./ha)	Wheat	Alopecurus	Bromus	Echinochloa	Lolium	Galium	Matricaria	Solanum
13	250	5	100	—	100	80	100	100	100
14	125	—	95	95	100	90	70	100	100

2) Compound of Preparation Ex. No.	Application rate g ai./ha)	Wheat	Alopecurus	Cyperus	Digitaria	Echinochloa	Galium	Matricaria	Solanum
43	125	10	100	100	100	100	100	100	100

-continued

Tables for Example A
Pre-emergence test/greenhouse

3) Compound of Preparation Ex. No.	Application rate g ai./ha)	Wheat	Alo-pecurus	Cyperus	Digitaria	Galium	Galinsoga	Matricaria	Solanum
60	500	20	95	100	80	95	95	95	95

4) Compound of Preparation Ex. No.	Application rate g ai./ha)	Soya	Bromus	Echino-chloa	Lolium	Poa	Galium	Galinsoga	Matricaria	Solanum
75	1000	10	80	90	95	95	95	100	95	95

5) Compound of Preparation Ex. No.	Application rate g ai./ha)	Cotton	Alo-pecurus	Digitaria	Echino-chloa	Poa	Galinsoga	Matricaria	Solanum
104	250	0	80	90	80	80	90	95	90

6) Compound of Preparation Ex. No.	Application rate g ai./ha)	Wheat	Soya	Digitaria	Poa	Galinsoga	Matricaria	Solanum
115	100	0	0	95	—	100	95	90
121	125	0	0	—	70	95	95	90

7) Compound of Preparation Ex. No.	Application rate g ai./ha)	Alo-pecurus	Bromus	Cyperus	Echino-chloa	Lolium	Galium	Matricaria	Solanum
76	500	100	100	100	100	100	100	100	100

8) Compound of Preparation Ex. No.	Application rate g ai./ha)	Alo-pecurus	Cyperus	Digitaria	Echino-chloa	Galium	Galinsoga	Matricaria	Solanum
73	250	—	95	95	95	95	95	95	95
74	250	80	—	95	90	90	100	95	95

9) Compound of Preparation Ex. No.	Application rate g ai./ha)	Alo-pecurus	Cyperus	Echino-chloa	Galium	Galinsoga	Matricaria	Solanum
5	125	95	90	95	95	95	95	90
4	125	90	95	90	90	95	95	90
85	125	90	90	90	90	95	95	90
84	250	80	95	70	90	95	95	95
19	250	80	100	95	—	95	95	—
6	500	95	90	90	95	95	95	95
34	250	99	95	90	100	—	100	100
35	250	95	—	95	95	100	95	95
22	250	80	—	95	100	100	95	95
23	250	—	—	95	100	100	95	—
25	500	80	80	100	100	—	100	100
118	250	80	95	95	90	95	95	95

10) Compound of Preparation Ex. No.	Application rate g ai./ha)	Alo-pecurus	Digitaria	Echino-chloa	Galium	Matricaria	Solanum
82	500	95	95	100	100	100	100
63	125	100	95	100	100	100	100

11) Compound of Preparation Ex. No.	Application rate g ai./ha)	Alo-pecurus	Digitaria	Echino-chloa	Poa	Galium	Galinsoga	Matricaria	Solanum
17	250	95	95	—	95	95	95	95	95
18	250	90	90	95	90	95	100	100	95

12) Compound of Preparation Ex. No.	Application rate g ai./ha)	Alo-pecurus	Galium	Matricaria	Solanum
38	500	80	100	100	95
39	500	80	100	100	100

-continued

Tables for Example A
Pre-emergence test/greenhouse

13) Compound of Preparation Ex. No.	Application rate g ai./ha)	Cyperus	Echino-chloa	Lolium	Galium	Matricaria	Solanum
77	500	95	90	80	95	100	95

Example B

Post-emergence test
Solvent: 5 parts by weight of acetone
Emulsifier: 1 part by weight of alkylaryl polyglycol ether

In this test, for example, the compounds of Preparation Example 6, 17, 18, 19, 22, 60, 63, 73, 76, 77, 82, 84, 118 and 121 show strong activity against weeds (cf. the tables below for Example B), and without exception they are tolerated well by crop plants, such as, for example, wheat.

Tables for Example B
Post-emergence test/greenhouse

1) Compound of Preparation Ex. No.	Application rate (g ai./ha)	Wheat	Abutilon	Datura	Ipomoea	Matricaria	Solanum	Xanthium
84	125	10	—	90	90	80	90	70
19	1000	—	95	90	95	95	95	100
6	125	10	95	90	80	90	95	70
22	500	5	100	95	95	100	90	100
118	250	10	95	95	95	90	100	100
73	125	20	95	95	90	100	95	100
60	125	5	90	90	80	—	90	70
121	500	5	—	60	100	70	95	95
76	500	20	95	70	90	95	95	100
77	500	—	95	—	80	100	95	100
17	30	10	95	90	90	95	90	95

2) Compound of Preparation Ex. No.	Application rate (g ai./ha)	Wheat	Lolium	Sorghum	Datura	Ipomoea	Matricaria	Solanum	Xanthium
82	500	—	95	95	100	100	100	100	100
18	125	10	80	80	90	90	100	90	95

3) Compound of Preparation Ex. No.	Application rate (g ai./ha)	Alopecurus	Lolium	Sorghum	Datura	Ipomoea	Matricaria	Solanum	Xanthium
63	125	90	80	95	95	95	95	100	95

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent, the stated amount of emulsifier is added and the concentrate is diluted with water to the desired concentration.

Test plants which have a height of 5–15 cm are sprayed with the preparation of the active compound in such a way as to apply the particular amounts of active compound desired per unit area. The concentration of the spray liquor is chosen so that the particular desired amounts of active compound are applied in 1000 1 of water/ha. After three weeks, the degree of damage to the plants is rated in % damage by comparison with the development of the untreated control.

The figures denote:

0%=no effect (like untreated control)

100%=total destruction

Example C

Sphaerotheca Test (cucumber)/protective

Solvent: 4.7 parts by weight of acetone
Emulsifier: 0.3 parts by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for protective activity, young plants are sprayed with the preparation of active compound until dew-moist. After the spray coating has dried on, the plants are dusted with conidia of the fungus Sphaerotheca fuliginea.

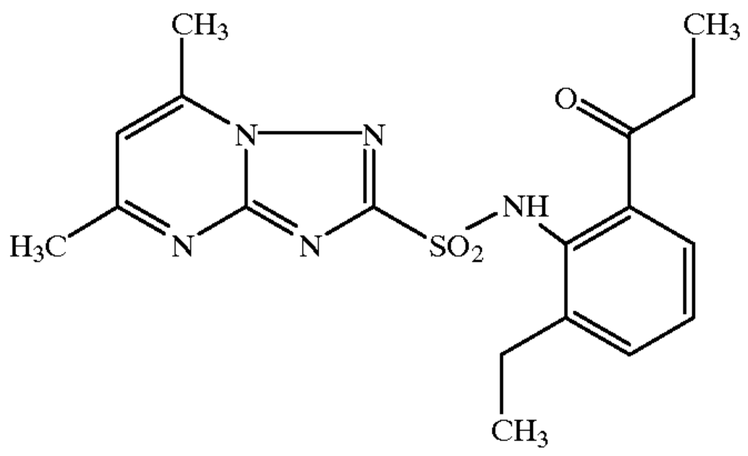
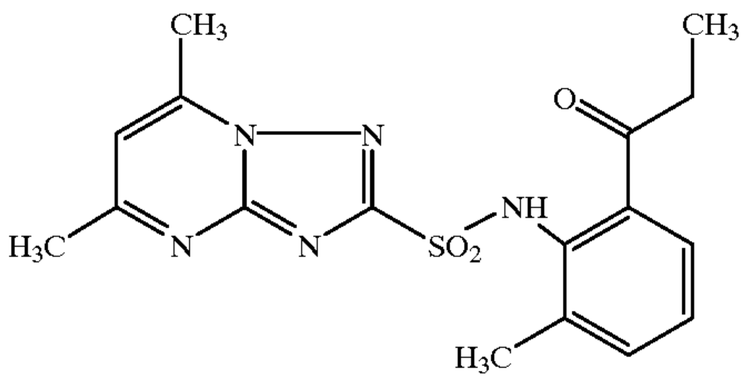
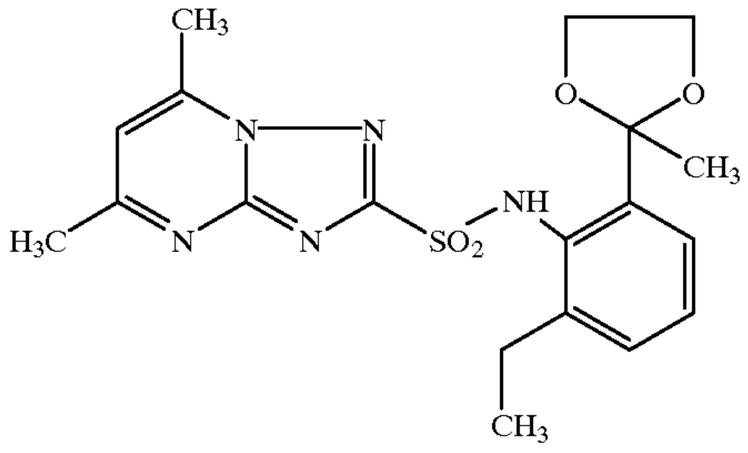
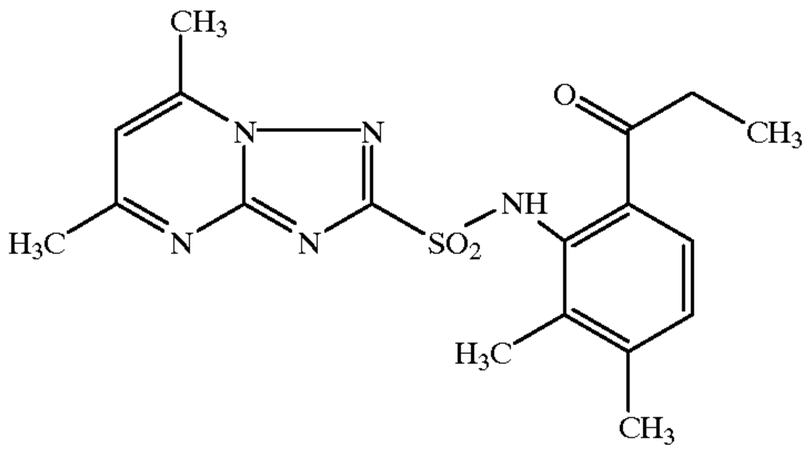
The plants are subsequently placed in a greenhouse at 23 to 24° C. and at a relative atmospheric humidity of approximately 75%.

Evaluation is carried out 10 days after the inoculation.

In this test, for example, the compounds of Preparation Example 4, 5, 19 and 85 show strong activity (cf. Table C below).

TABLE C

Spaerotheca test (cucumber)/protective

Active compound	Efficacy in % of the untreated control at an active compound concentration of 100 ppm
 (5)	100
 (4)	92
 (85)	95
 (19)	100

Example D

Podosphaera Test (apple)/protective

Solvent: 4.7 parts by weight of acetone

Emulsifier: 0.3 parts by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amounts of solvent and emulsifier, and the concentrate is diluted with water to the desired concentration.

To test for protective activity, young plants are sprayed with the preparation of active compound until dew-moist. After the spray coating has dried on, the plants are inoculated by dusting with conidia of the causative organism of apple mildew Podosphaera leucotricha.

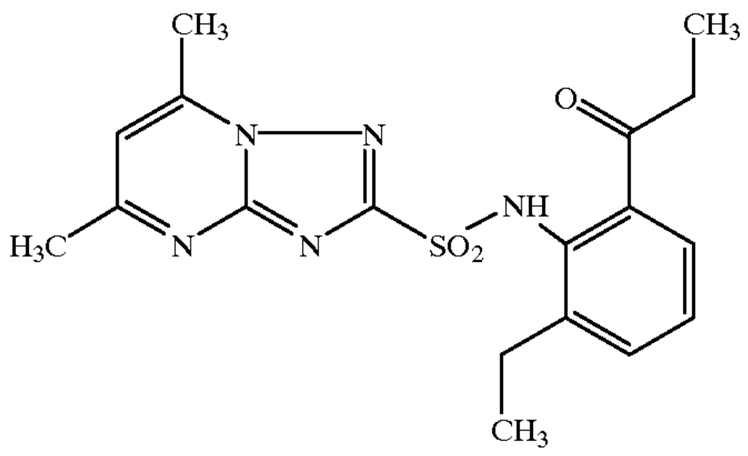
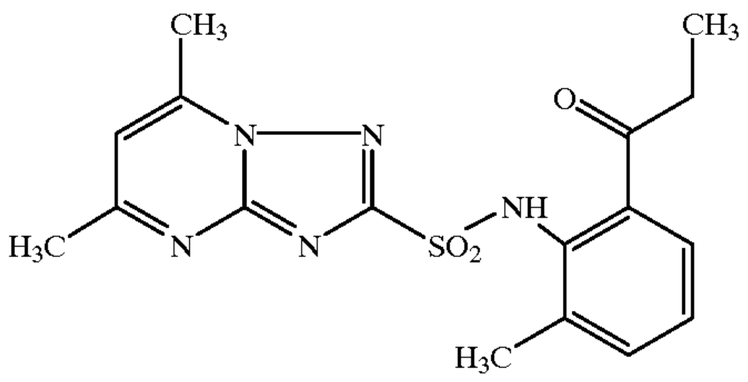
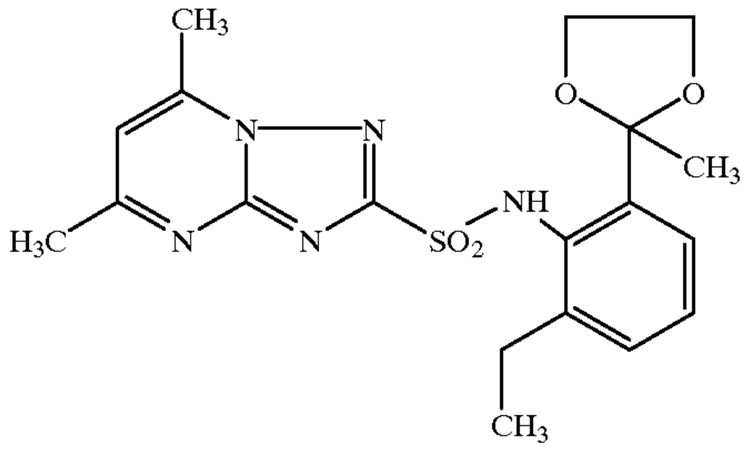
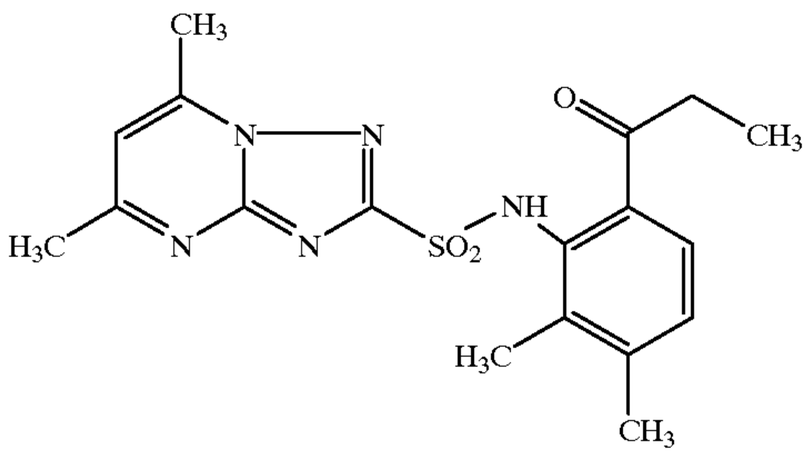
The plants are then placed in a greenhouse at 23° C. and a relative atmospheric humidity of approximately 70%.

Evaluation is carried out 10 days after the inoculation.

In this test, for example, the compounds of Preparation Example 4, 5, 19 and 85 show strong activity (cf. Table D below).

TABLE D

Podosphaera test (apple)/protective

Active compound	Efficacy in % of the untreated control at an active compound concentration of 100 ppm
 (5)	99
 (4)	85
 (85)	100
 (19)	100

Example E

Plutella Test

Solvent: 7 parts by weight of dimethylfornamide

Emulsifier: 1 part by weight of alkylaryl polyglycol ether

To produce a suitable preparation of active compound, 1 part by weight of active compound is mixed with the stated amount of solvent and the stated amount of emulsifier, and the concentrate is diluted with water to the desired concentration.

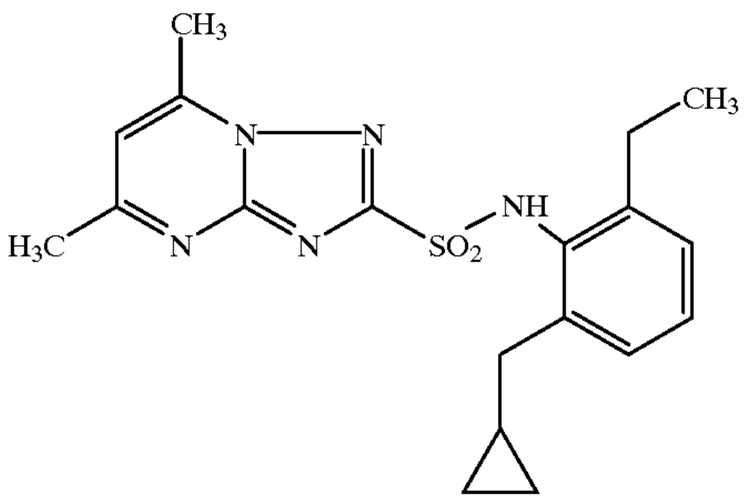
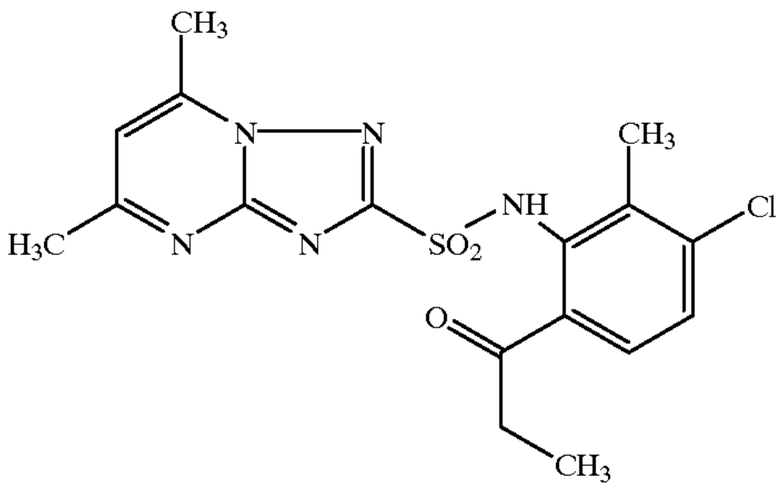
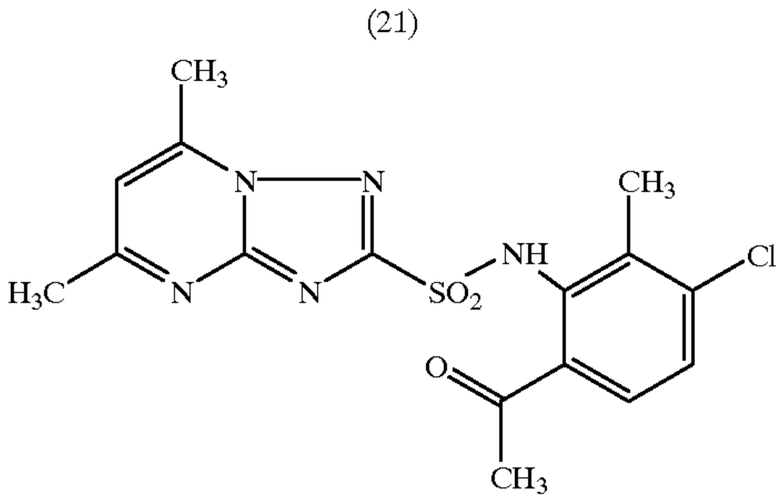
Cabbage leaves (Brassica oleracea) are treated by being dipped into the preparation of active compound of the desired concentration and are populated with caterpillars of the diamond-back moth (Plutella maculipennis) while the leaves are still moist.

After the desired period of time, the kill in % is determined. 100% means that all caterpillars have been killed; 0% means that none of the caterpillars have been killed.

In this test, for example, the compounds of Preparation Examples 21, 23 and 36 show strong activity (cf. Table E below).

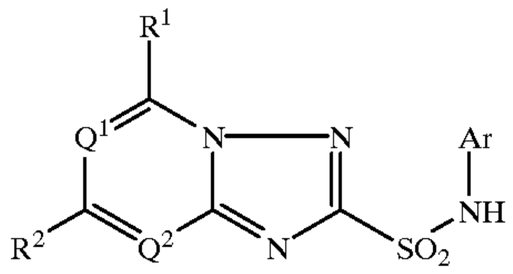
TABLE E

(plant damaging insects)
Plutella test

Active compound	Active compound concentration in %	Kill after 7d
 (36)	0.1	100
 (21)	0.1	100
 (23)	0.1	100

What is claimed is:

1. A substituted triazoloazinesulphonamide of the formula (I)



(I)

wherein

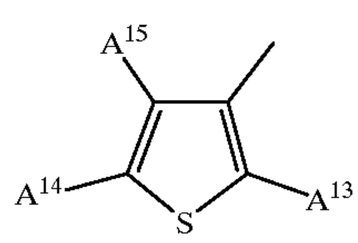
Q^1 represents a CH grouping,

Q^2 represents nitrogen,

R^1 represents halogen or represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_1–C_4-alkylthio, C_1–C_4-alkylamino or di-(C_1–C_4- alkyl)amino, each of which is unsubstituted or substituted by hydroxyl, halogen or C_1–C_4-alkoxy,

R^2 represents hydrogen, halogen or represents C_1–C_4-alkyl, C_1–C_4-alkoxy, C_1–C_4-alkylthio, C_1–C_4-alkylamino or di-(C_1–C_4-alkyl)amino, each of which is unsubstituted or substituted by halogen, and

Ar represents



wherein

A^{13} represents cyano, carbamoyl, 5,6-dihydro-1,4,2-dioxazin-3-yl, halogen, C_1–C_4-alkyl, C_1–C_4-alkyl-carbonyl or C_1–C_4-alkoxy-carbonyl,

A^{14} represents hydrogen, represents cyano, cabamoyl, halogen, C_1–C4-alkyl, C_1–C_4-alkylcarbonyl or C_1–C_4-alkoxy-carbonyl,

A^{15} represents hydrogen, represents cyano, carbamoyl, halogen, C_1–C4-alkyl, C_1–C_4-aklylcarbonyl or C_1–C_4-alkoxy-carbonyl, or together with A^{14} represents a fused benzo grouping,

and a salt of the compound of the formula (I), with the following proviso:

i) if A^{13} represents C_1–C_4-alkoxy-carbonyl then A^{14} and A^{15} cannot both be hydrogen.

2. A compound the formula (I) according to claim **1**, wherein

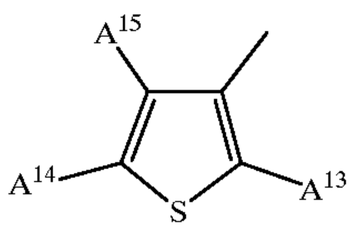
Q^1 represents a CH grouping,

Q^2 represents nitrogen,

R^1 represents fluorine, chlorine, bromine, or represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylamino, ethylamino, n- or i-propylamino, dimethyl-amino or diethylamino, each of which is unsubstituted or substituted by fluorine, chlorine, methoxy or ethoxy,

R^2 represents hydrogen, fluorine, chlorine, bromine or represents methyl, ethyl, n- or i-propyl, methoxy, ethoxy, n- or i-propoxy, methylthio, ethylthio, n- or i-propylthio, methylamino, ethylamine, n- or i-propylamino, dimethylamino or diethylamino, each of which is unsubstituted or substituted by fluorine, chlorine, methoxy, or ethoxy,

Ar represents



wherein

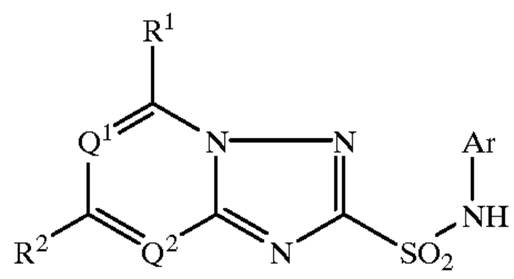
A^{13} represents cyano, carbamoyl, 5,6-dihydro-1,4,2-dioxazin-3-yl, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, acetyl, priopionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl,

A^{14} represents hydrogen, represents cyano, carbamoyl, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i-propoxycarbonyl,

A^{15} represents hydrogen, represents cyano, carbomoyl, fluorine, chlorine, bromine, methyl, ethyl, n- or i-propyl, acetyl, propionyl, n- or i-butyroyl, methoxycarbonyl, ethoxycarbonyl, n- or i propoxycarbonyl, or together with A^{14} represents a fused benzo grouping,

and a salt of the compound of the formula (I) selected from the group consisting of lithium, sodium, potassium, magnesium, calcium, ammonium, C_1–C_4-alkyl-ammonium, di-(C_1–C_4-alkyl) ammonium, tri-(C_1–C_4-alkyl)-ammonium, tetra-(C_1–C_4-alkyl)-ammonium, tri-(C_1–C_4-alkyl)-sulphonium, C_5- or C_6-cycloalkyl-ammonium and di-(C_1–C_2-alkyl)-benzyl-ammonium salts of compounds of the formula (I).

3. A substituted triazoloazinesulphonamide of the formula (I)



(I)

wherein

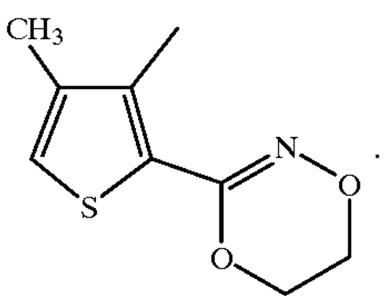
Q^1 represents CH

Q^2 represents N

R^1 represents CH_3

R^2 represents CH_3, and

Ar represents the following formula



4. A plant treatment composition comprising at least one compound of the formula (I) or one of the salts thereof according to claim **1** and one or more members selected from the group consisting of liquid solvents, solid carriers, emulsifiers, dispersing agents and foam-forming agents.

5. A method for controlling weeds, undesirable microorganisms, arthropods and/or nematodes comprising the step of allowing compounds of the formula (1) or salts thereof according to claim **1** to act on the weeds, the undesirable microorganisms, the arthropods and/or nematodes or their habitat.

* * * * *